PATENT-080004

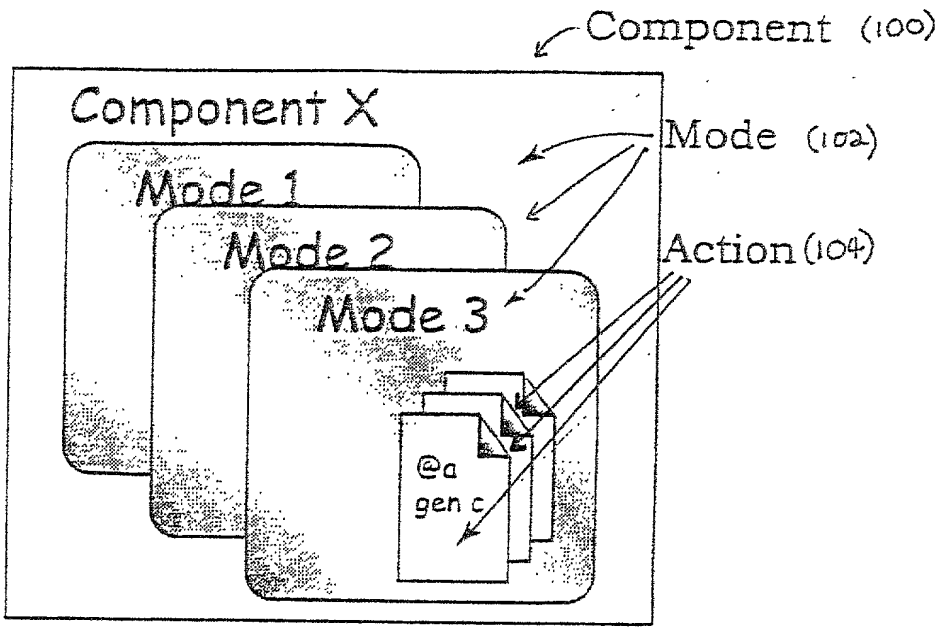

Figure 1

TOP SECRET//SCI

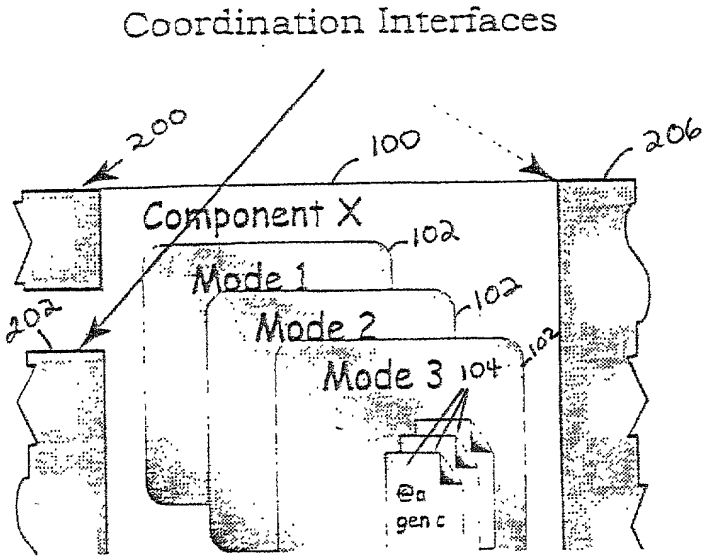

Figure 2

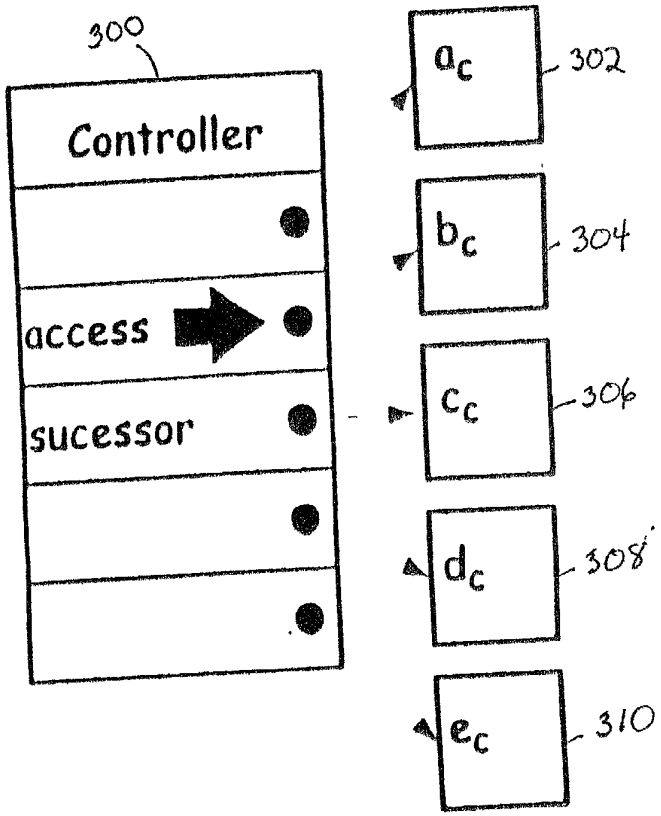

Figure 3A

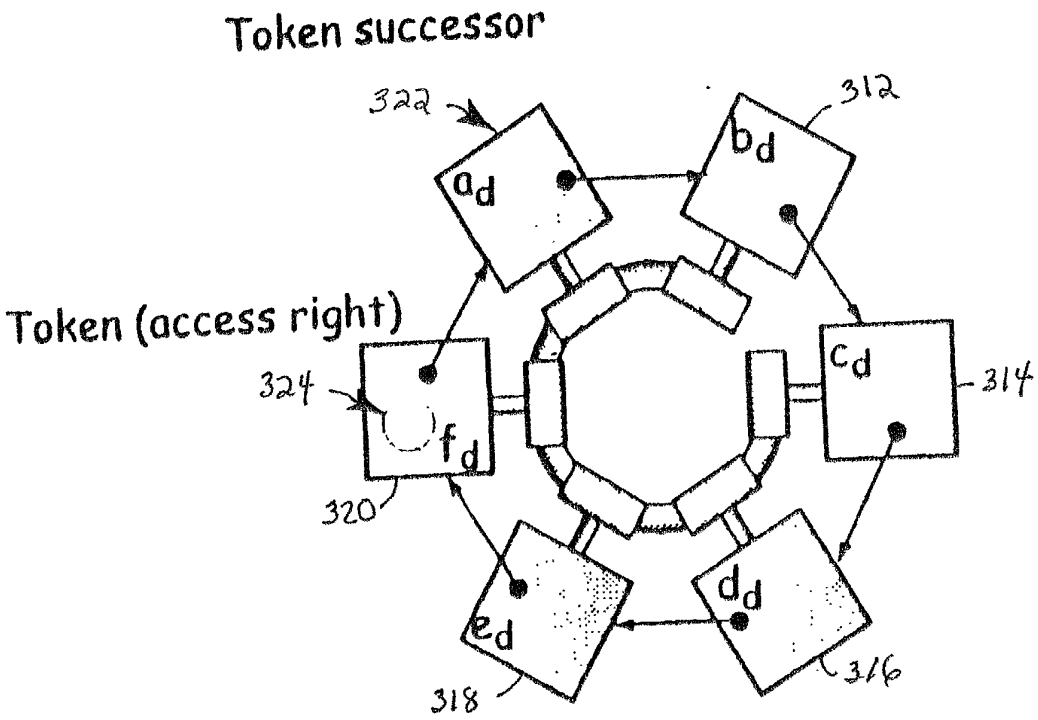

Figure 3B

TOT290 T9088860

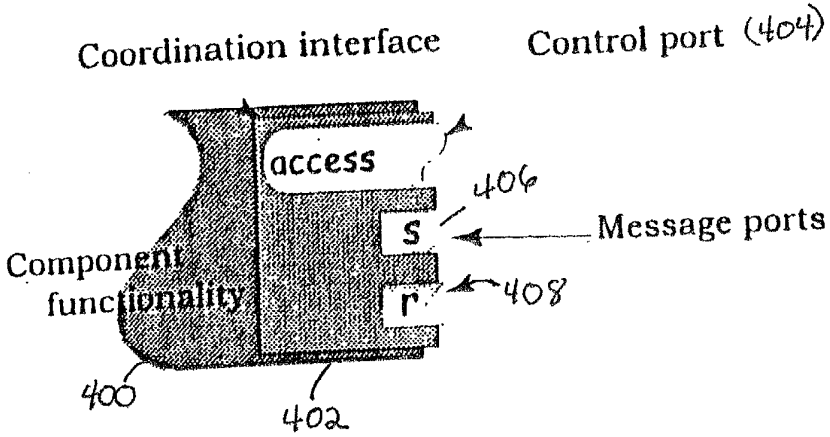

Figure 4A

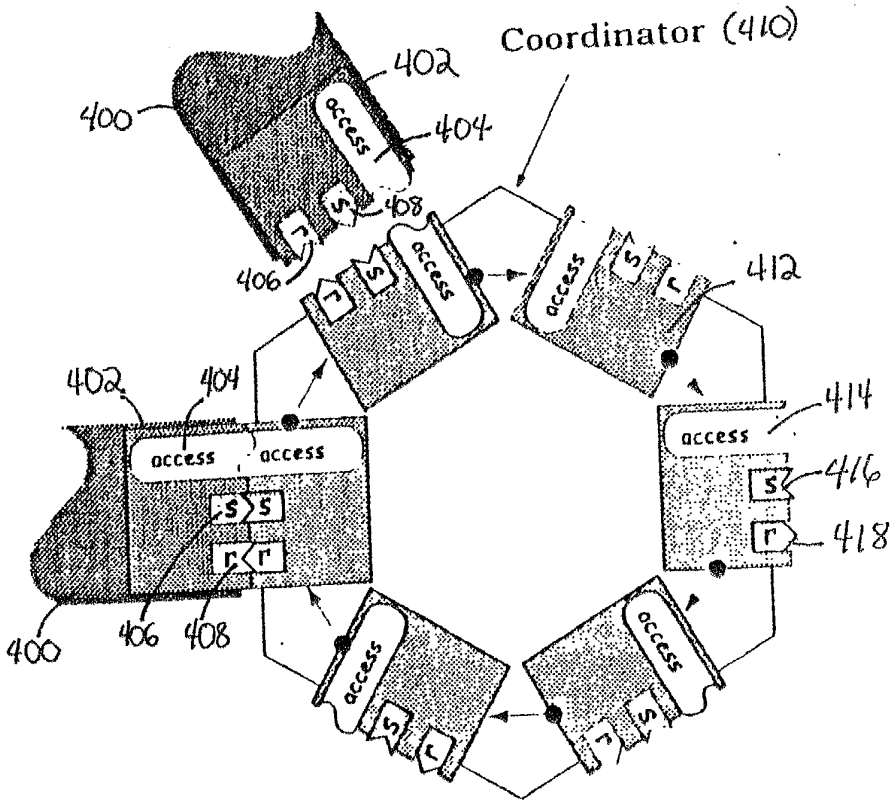

Figure 4B

Docket: 1000.1

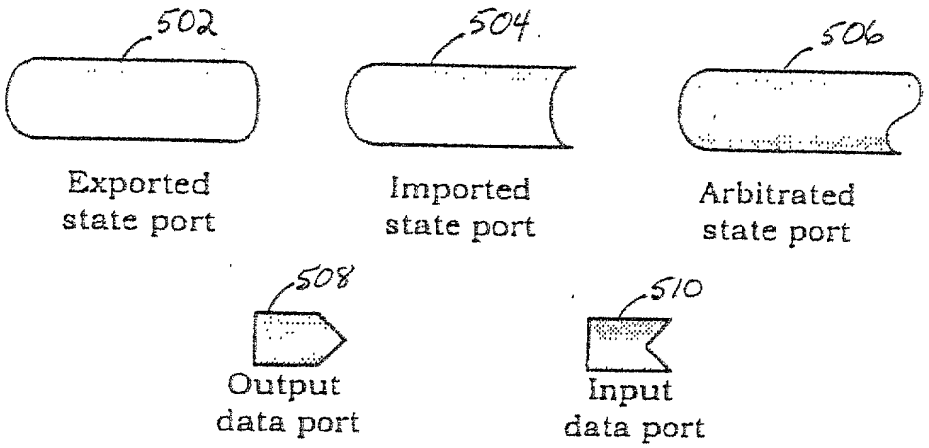

Figure 5

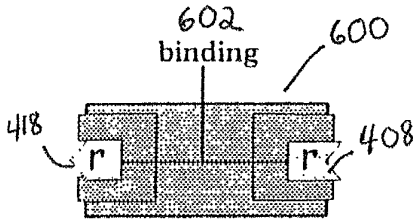

Figure 6A

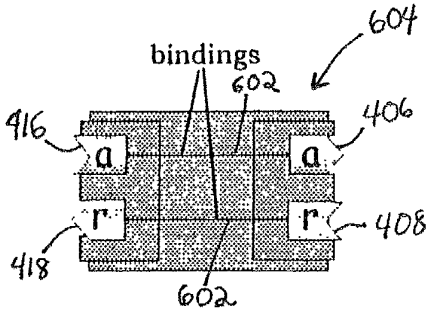

Figure 6B

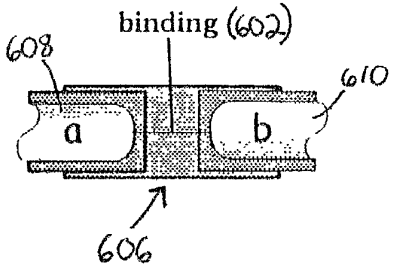

Figure 6C

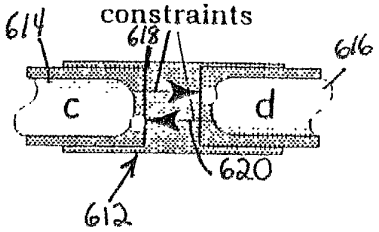

Figure 6D

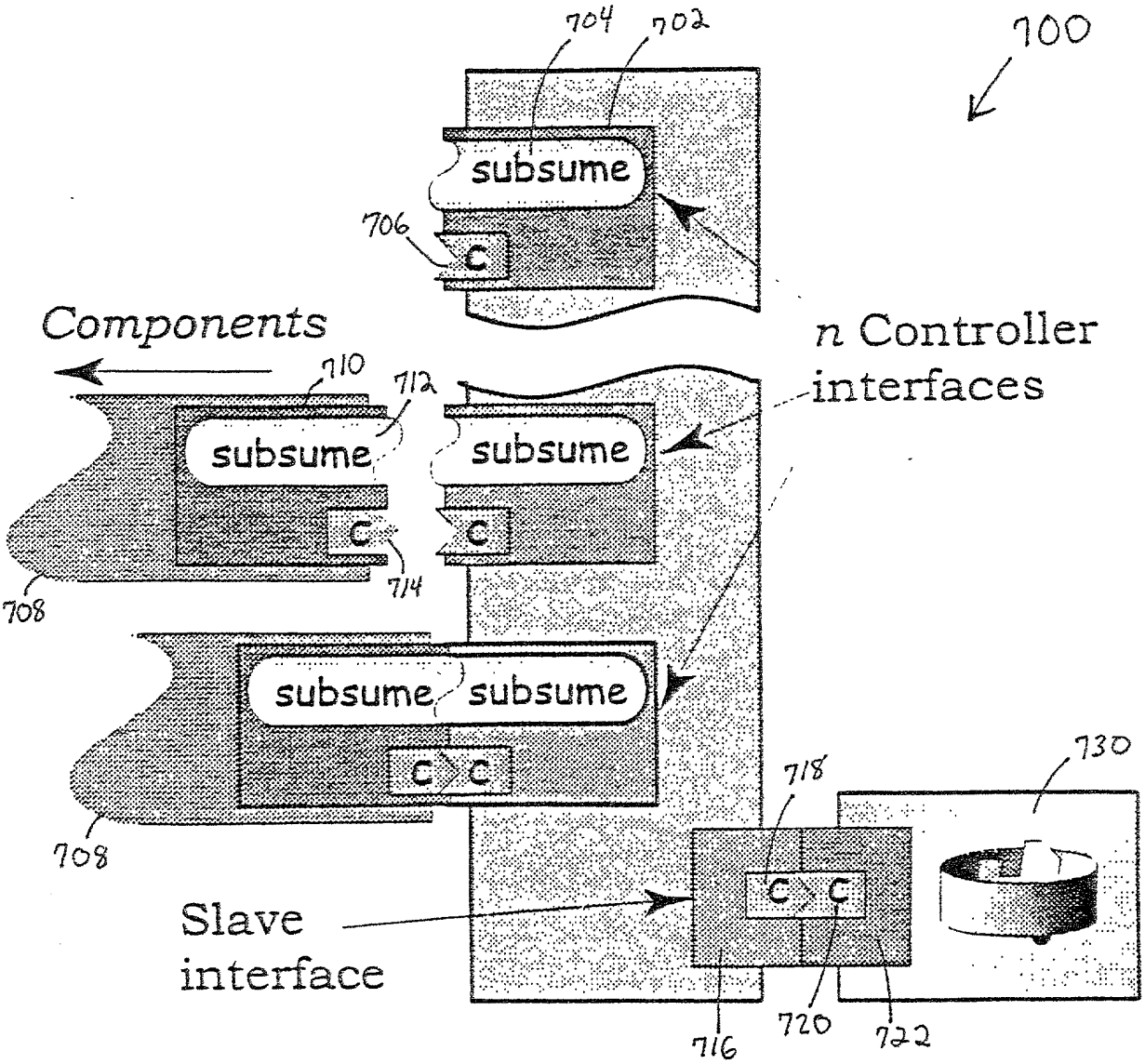
700
704
702
subsume
706
C
Components
n Controller interfaces
710
712
subsume
subsume
C
C
714
708
subsume
subsume
C > C
708
718
730
C > C
Slave interface
716
720
722

Figure 7

Docket No. 50277-0005

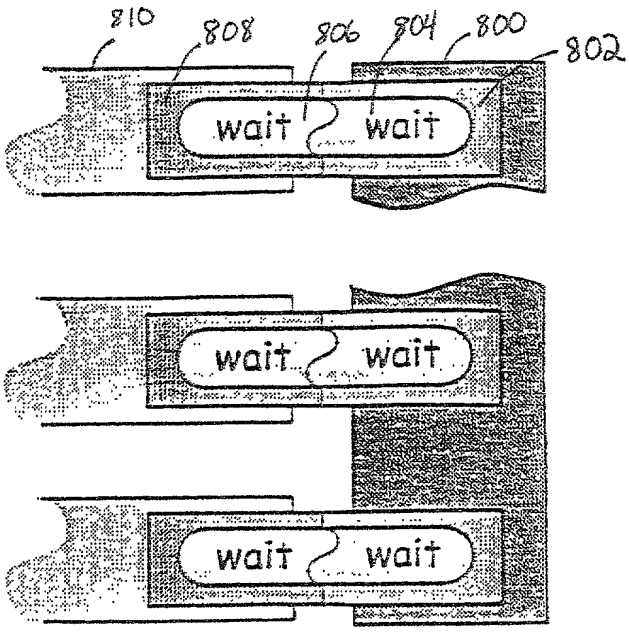

Figure 8

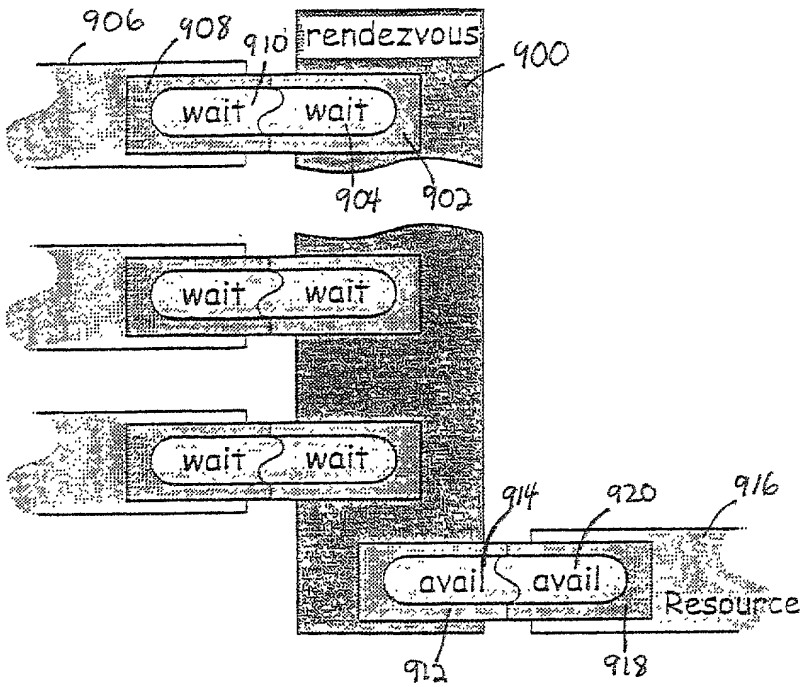
906
908
910
rendezvous
900
wait
wait
904
902
wait
wait
wait
wait
914
920
916
avail
avail
Resource
912
918

Figure 9

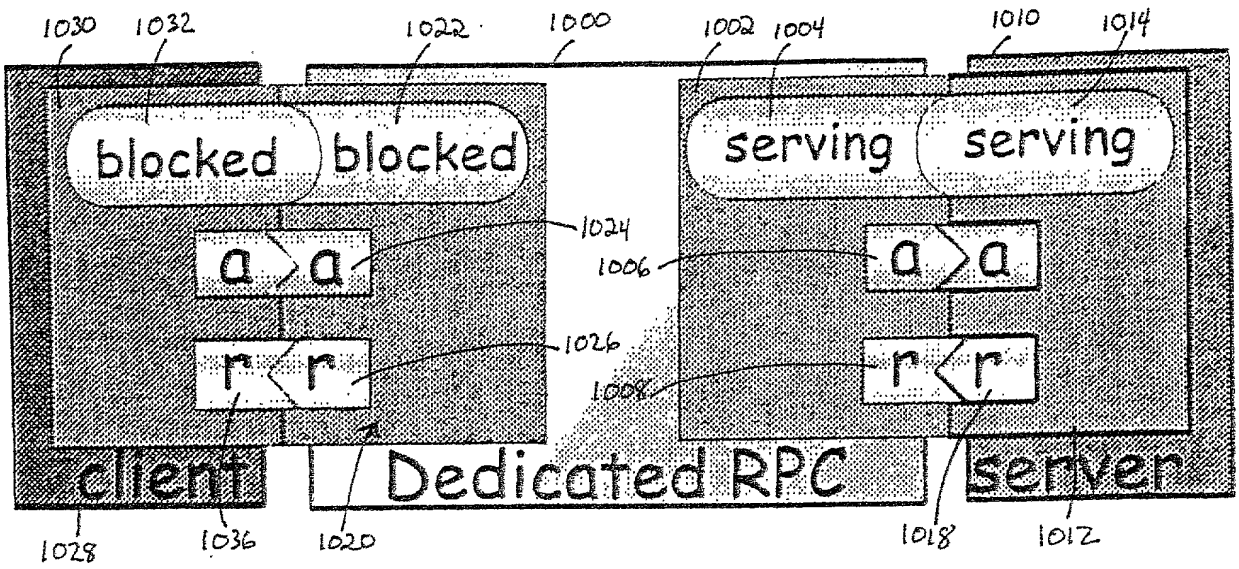
1030
1032
1022
1000
1002
1004
1010
1014
blocked
blocked
serving
serving
1024
a
a
1006
a
a
1026
r
r
1008
r
r
client
Dedicated RPC
server
1028
1036
1020
1018
1012

Figure 10

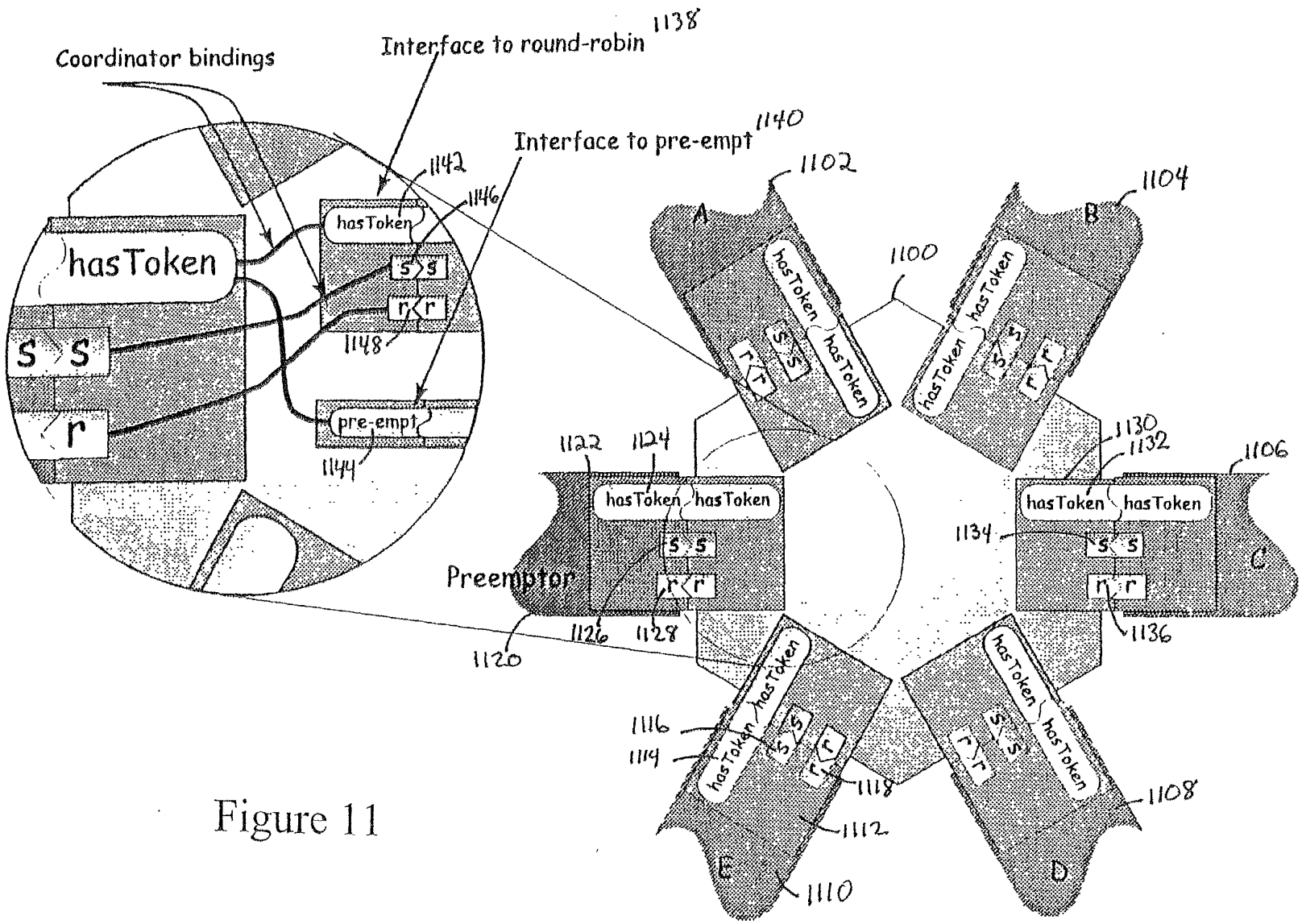
Coordinator bindings
Interface to round-robin
1138
Interface to pre-empt
1140
1142
1146
1148
1144
hasToken
s s
r r
pre-empt
1102
1104
1100
A
B
1122
1124
1130
1132
1106
1134
C
Preemptor
1120
1126
1128
1136
1116
1114
1118
1112
1108
E
D
1110

Figure 11

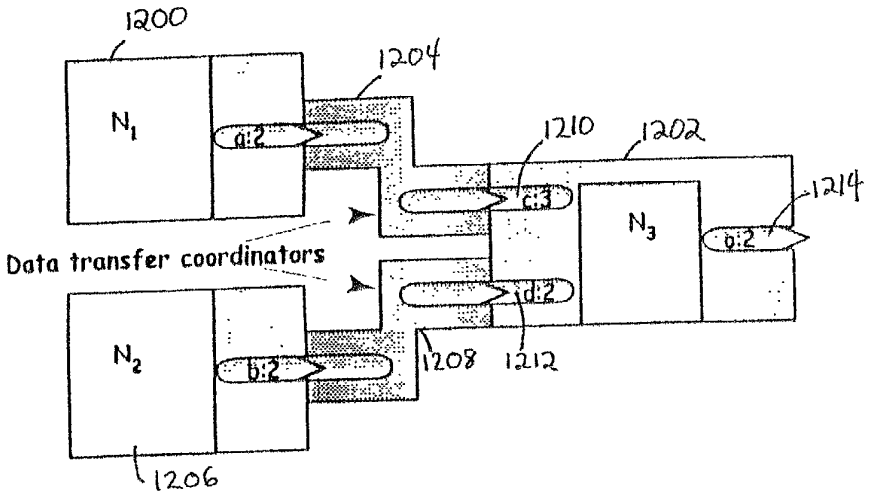

Figure 12A

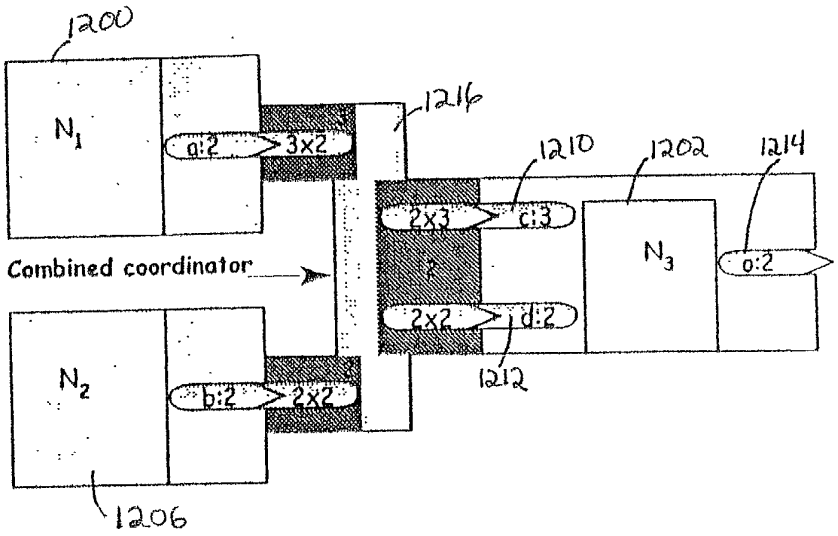

Figure 12B

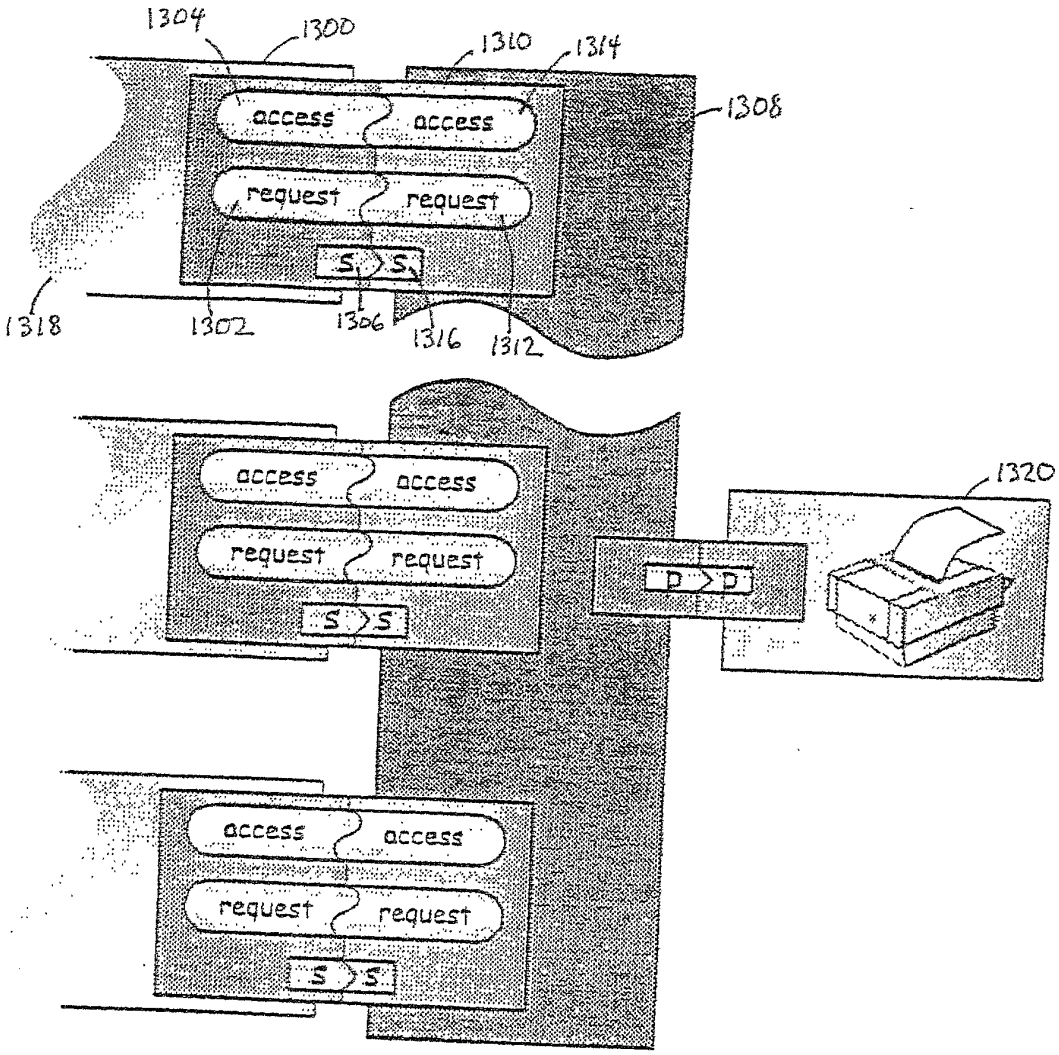
1304
1300
1310
1314
1308
access
access
request
request
S
S
1318
1302
1306
1316
1312
1320
access
access
request
request
S
S
P
P
access
access
request
request
S
S

Figure 13

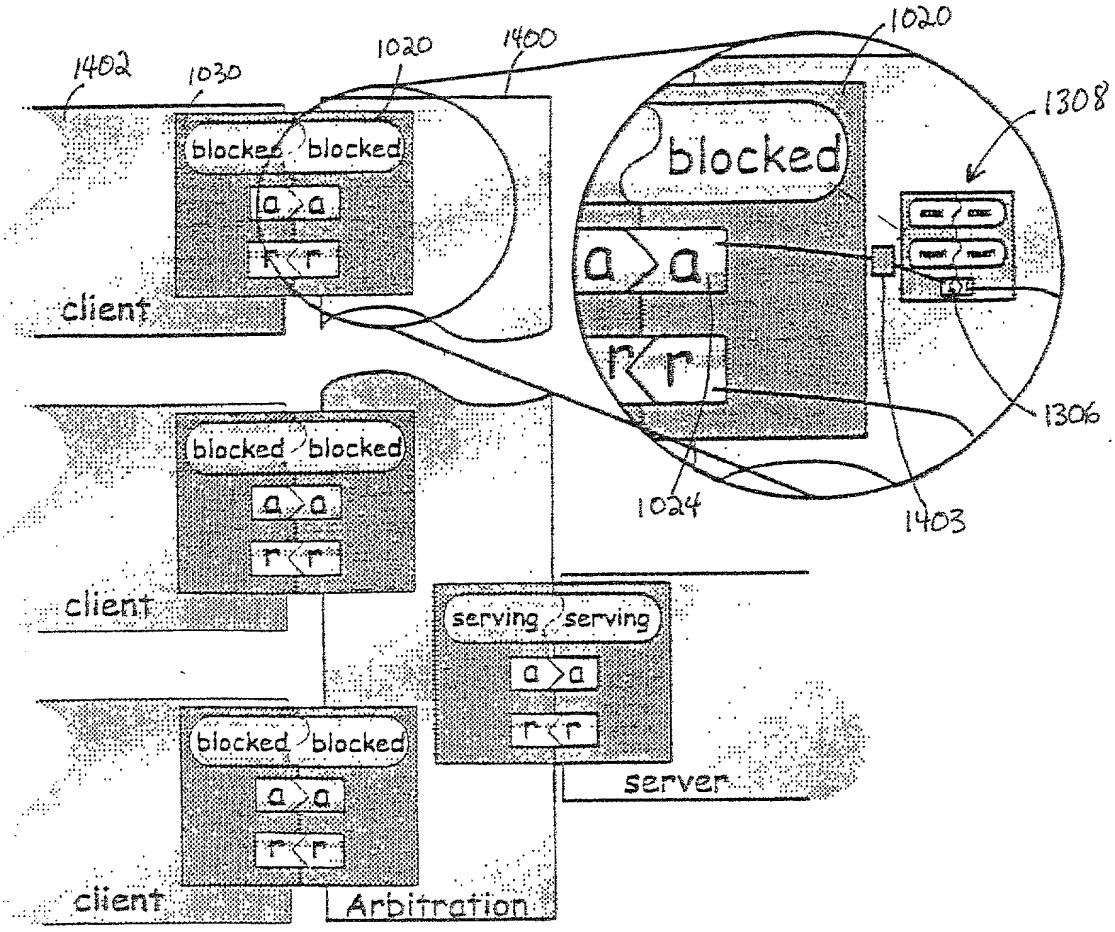
1402
1030
1020
1400
1020
1308
blocked
blocked
a > a
r < r
client
blocked
a > a
r < r
1306
1024
1403
blocked
blocked
a > a
r < r
client
serving
serving
a > a
r < r
server
blocked
blocked
a > a
r < r
client
Arbitration

Figure 14

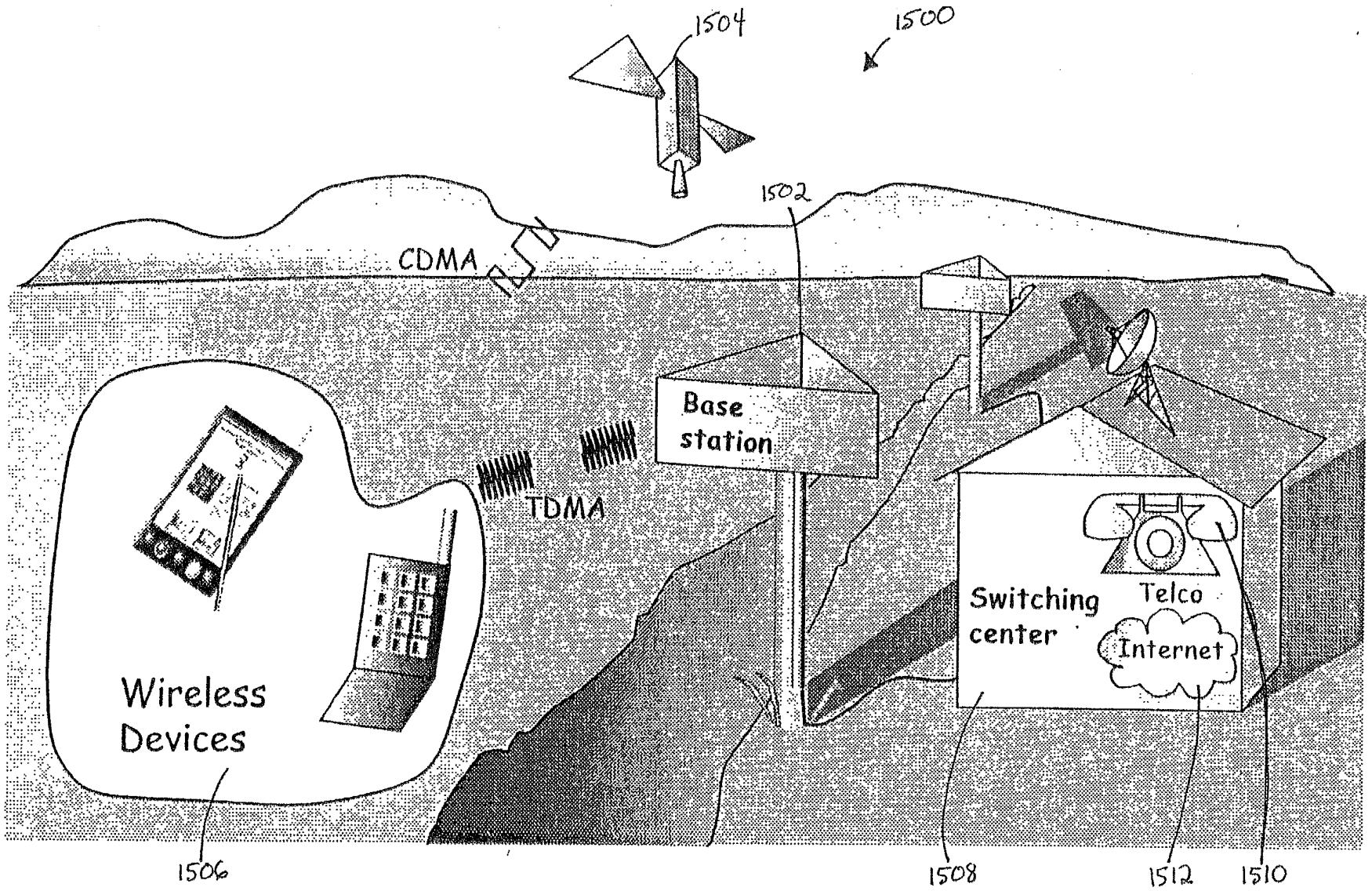
1504
1500
1502
CDMA
Base station
TDMA
Wireless Devices
Switching center
Telco
Internet
1506
1508
1512
1510

Figure 15

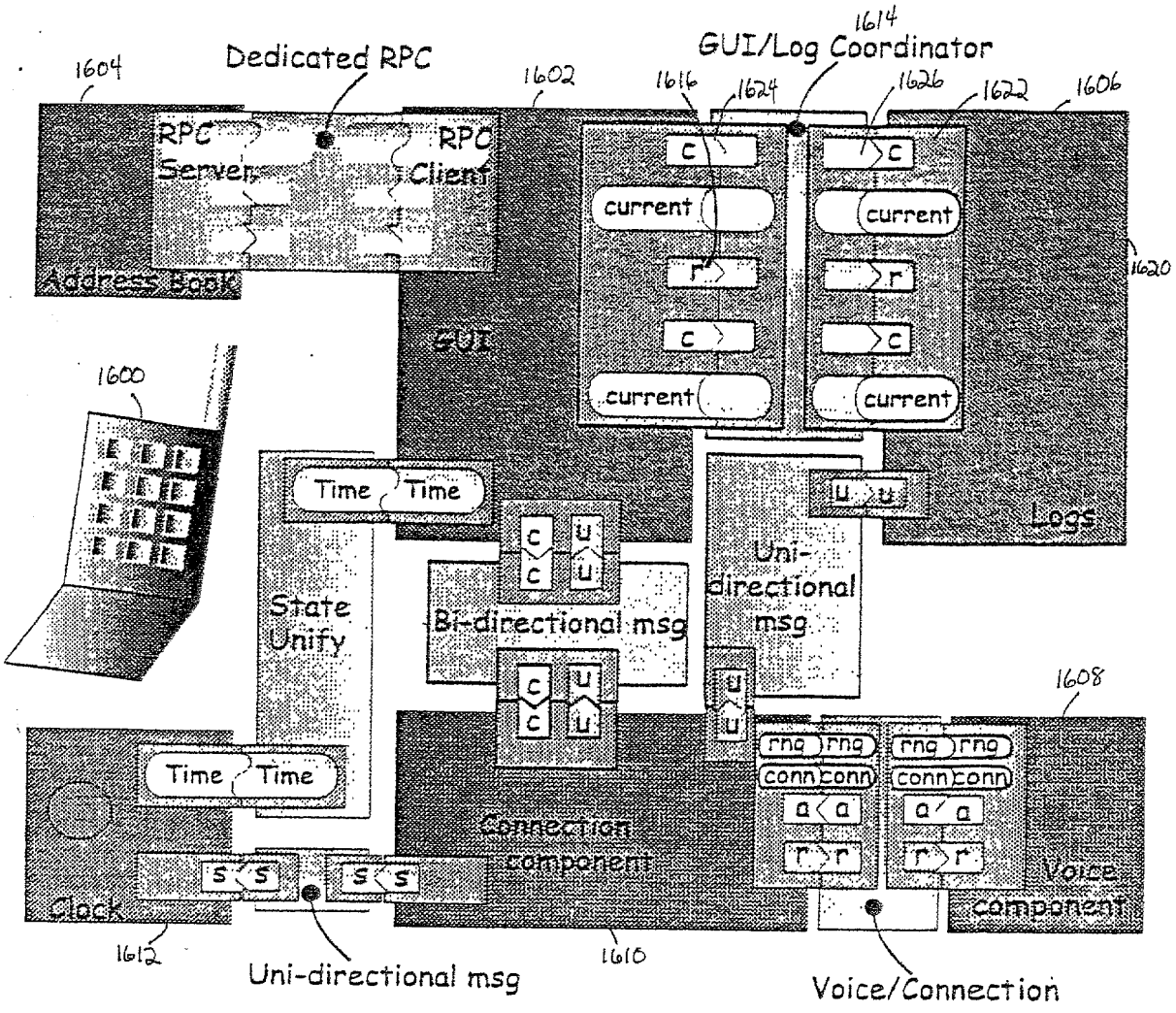
1604
Dedicated RPC
1614
GUI/Log Coordinator
1602
1616
1624
1626
1622
1606
RPC Server
RPC Client
Address Book
GUI
current
1620
1600
Time
State Unify
Bi-directional msg
Uni-directional msg
Logs
1608
Clock
Connection component
Voice component
1612
1610
Uni-directional msg
Voice/Connection

Figure 16

EOT290 T9088860

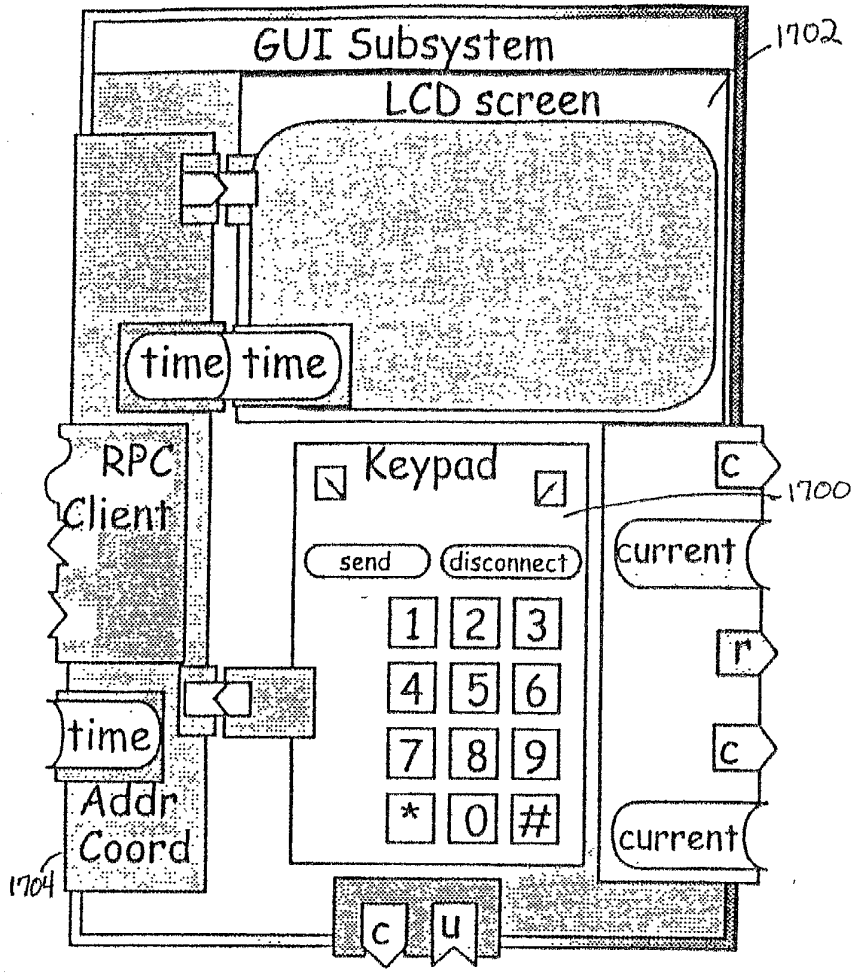

Figure 17A

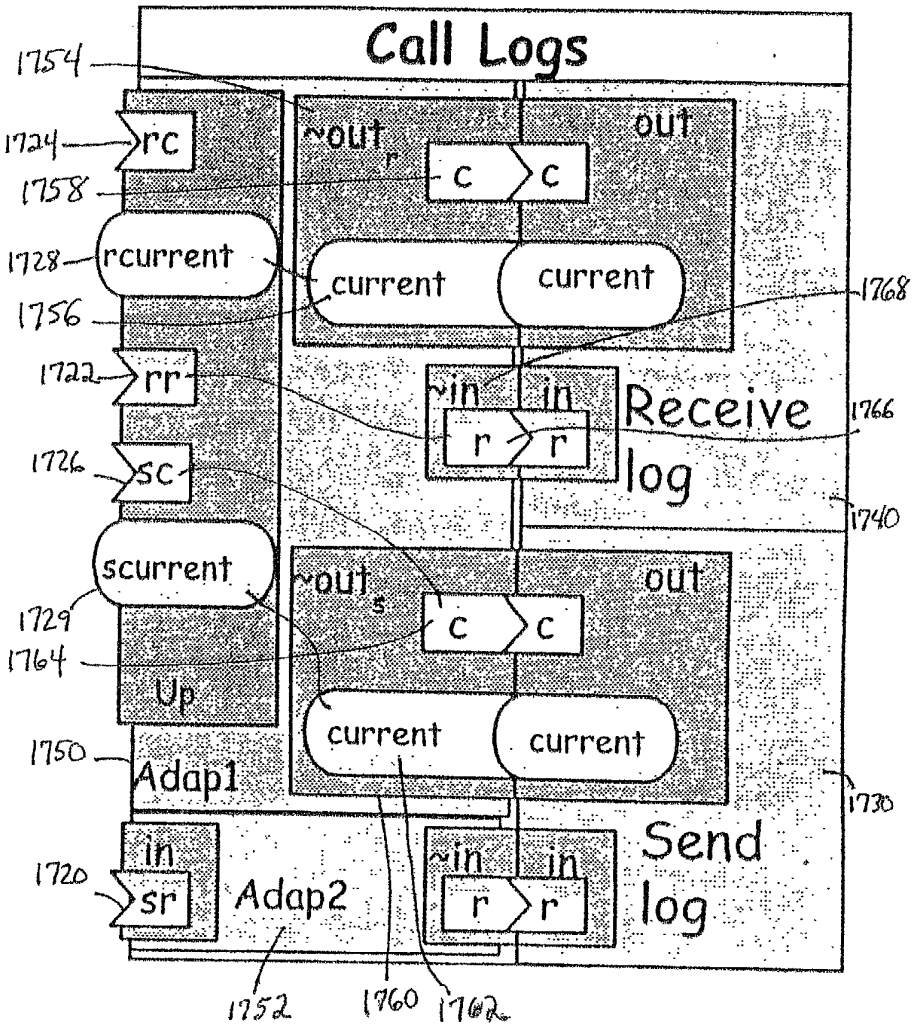

Figure 17B

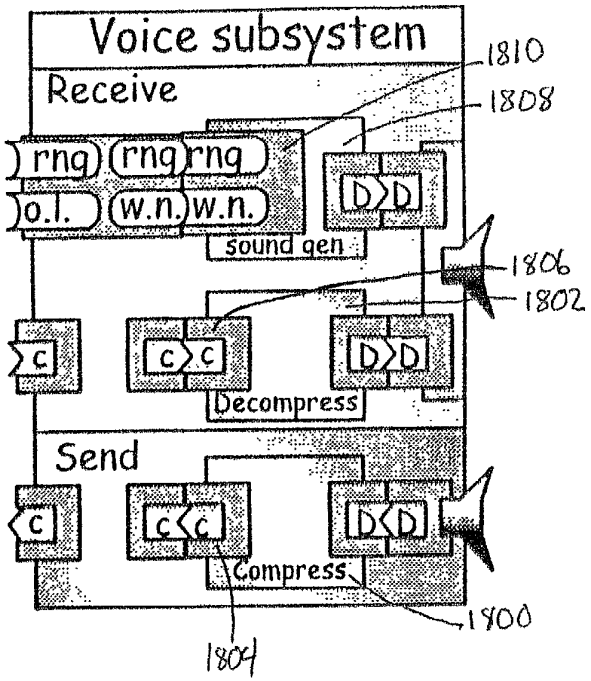

Figure 18A

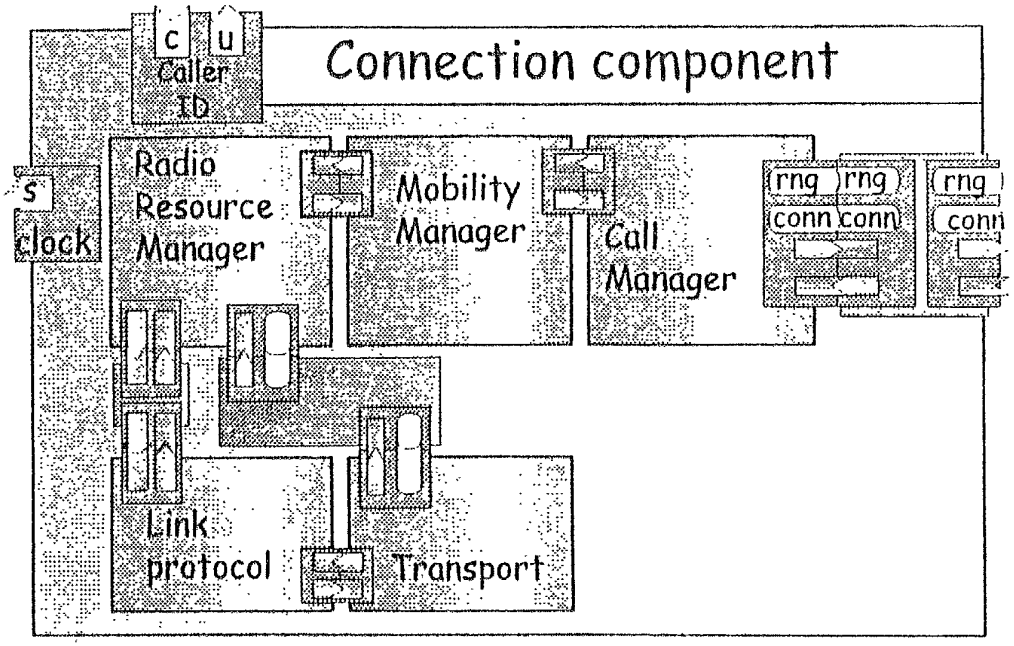

Figure 18B

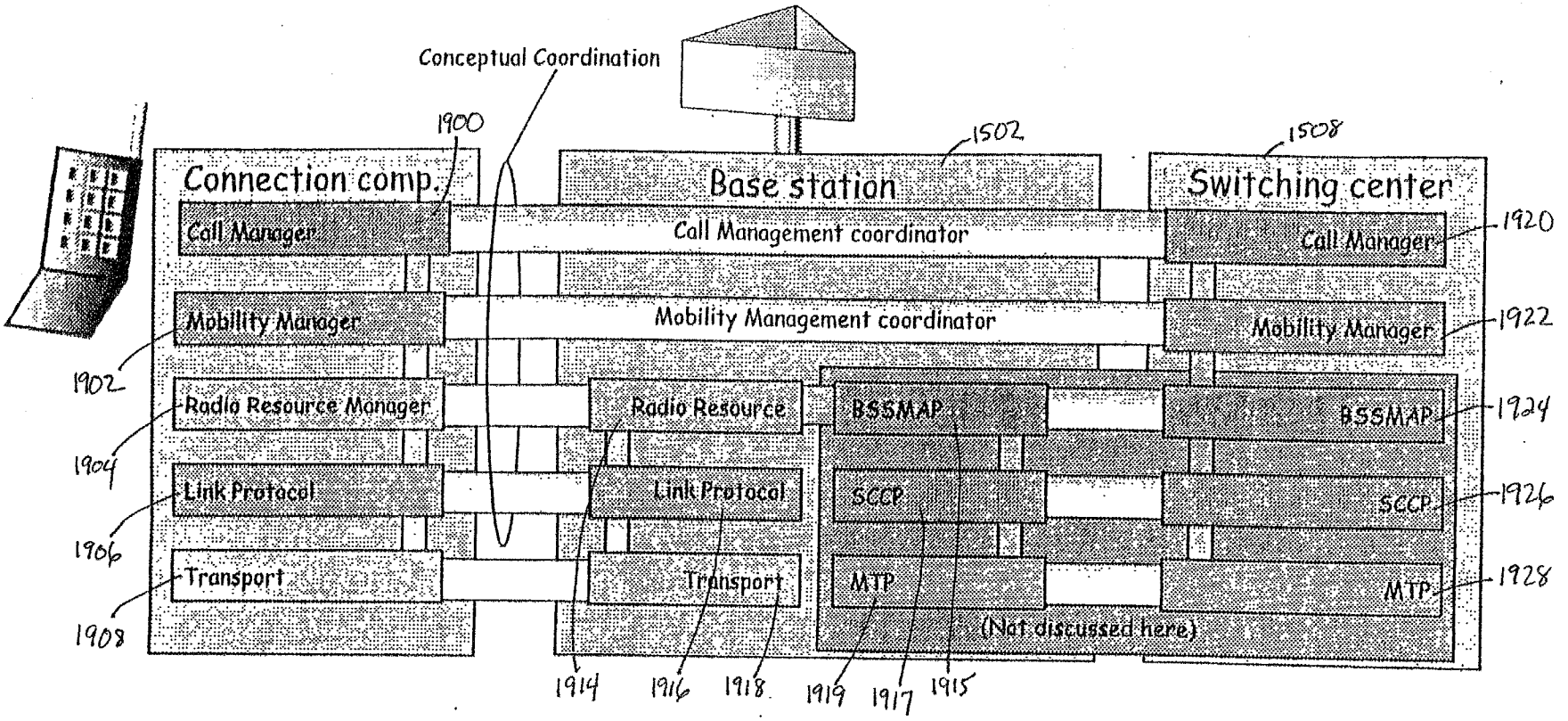
Conceptual Coordination
1900
1502
1508
Connection comp.
Base station
Switching center
Call Manager
Call Management coordinator
Call Manager
1920
Mobility Manager
Mobility Management coordinator
Mobility Manager
1922
1902
Radio Resource Manager
Radio Resource
BSSMAP
BSSMAP
1924
1904
Link Protocol
Link Protocol
SCCP
SCCP
1926
1906
Transport
Transport
MTP
MTP
1928
1908
(Not discussed here)
1914
1916
1918
1919
1917
1915

Figure 19

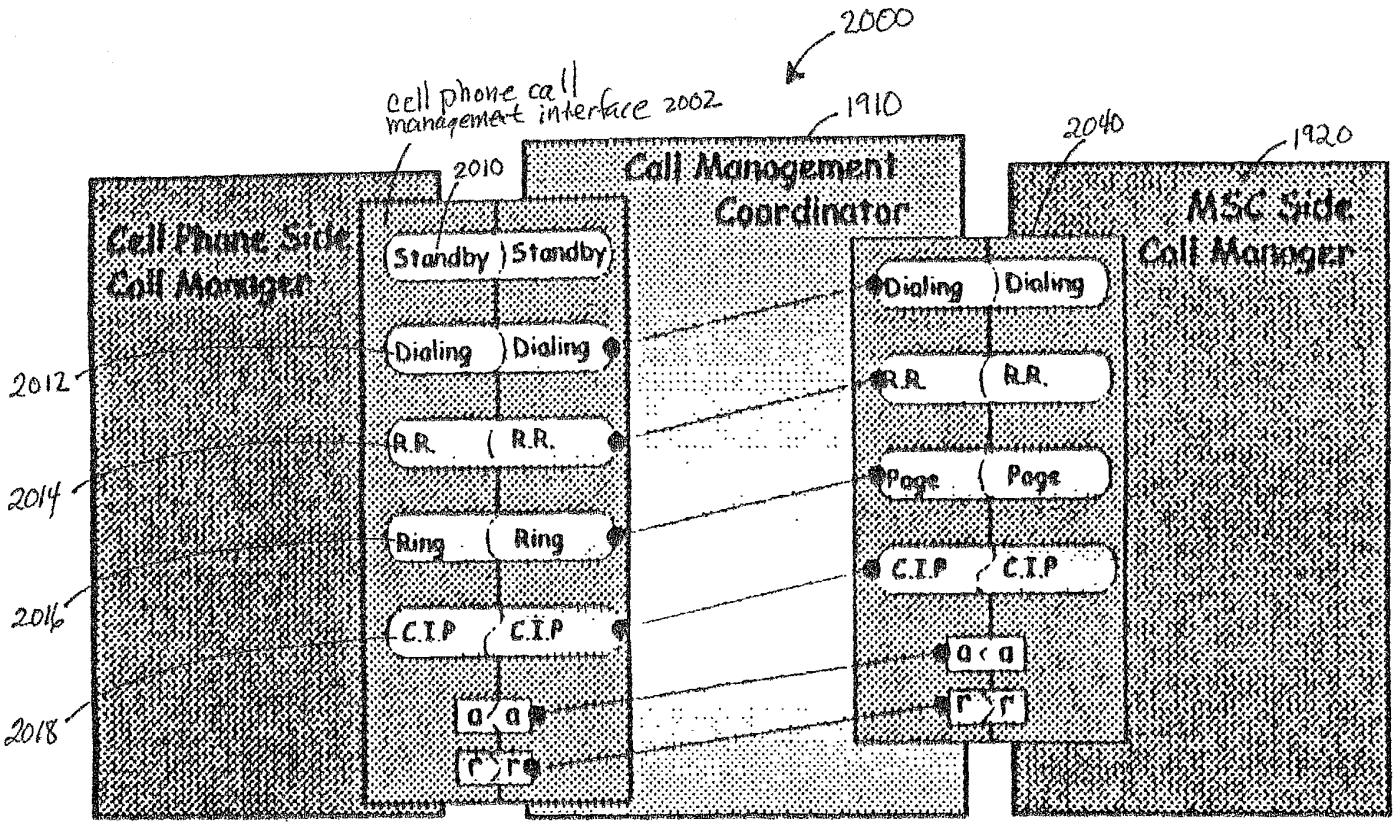
2000
cell phone call management interface 2002
1910
2040
1920
2010
Call Management Coordinator
Cell Phone Side Call Manager
MSC Side Call Manager
2012
2014
2016
2018
Standby
Standby
Dialing
Dialing
R.R.
R.R.
Ring
Ring
C.I.P
C.I.P
a
a
r
r
Page
Page

Figure 20

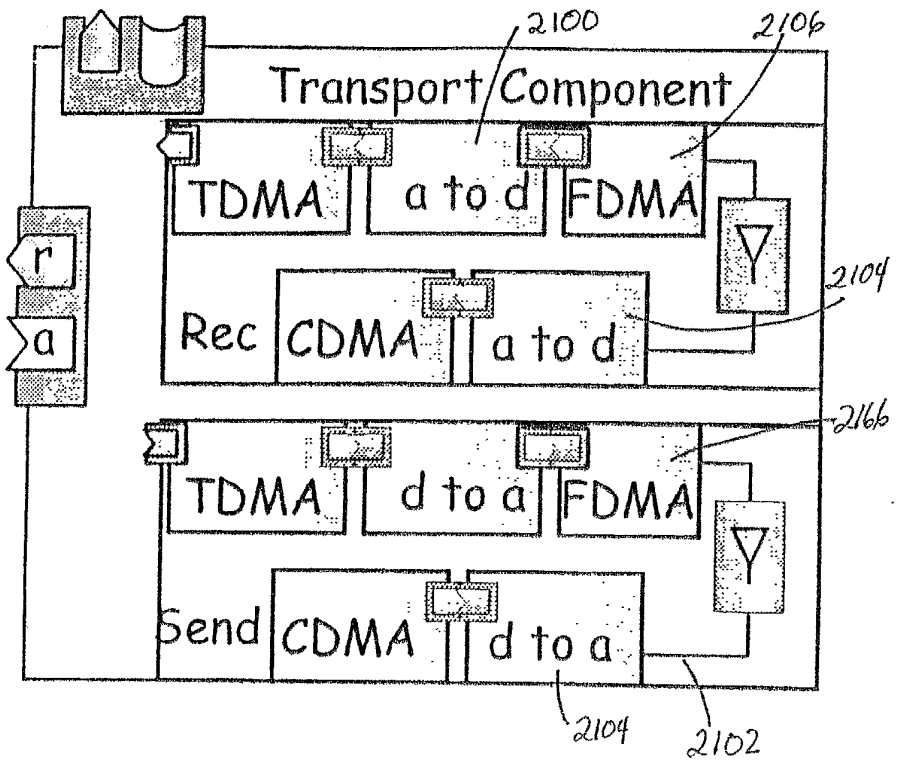

Figure 21A

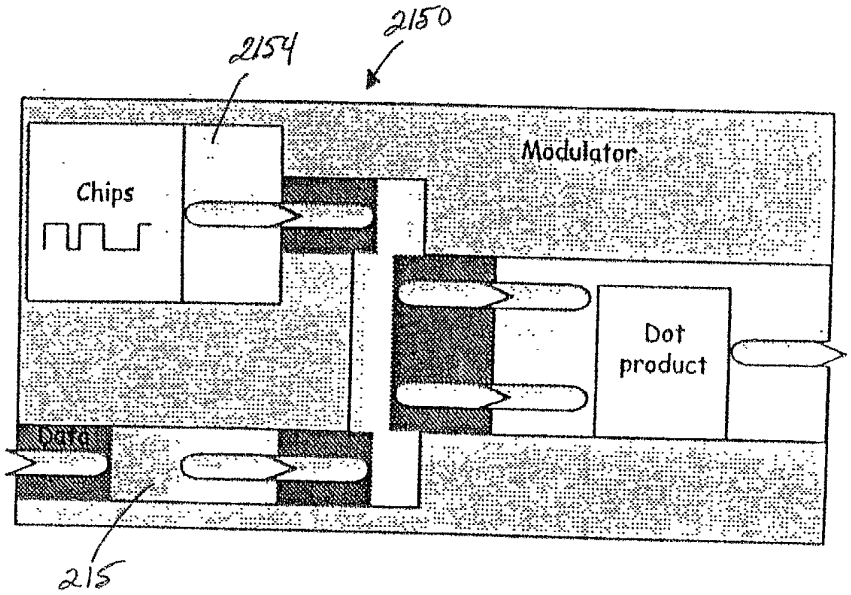

Figure 21B

FedEx Ground

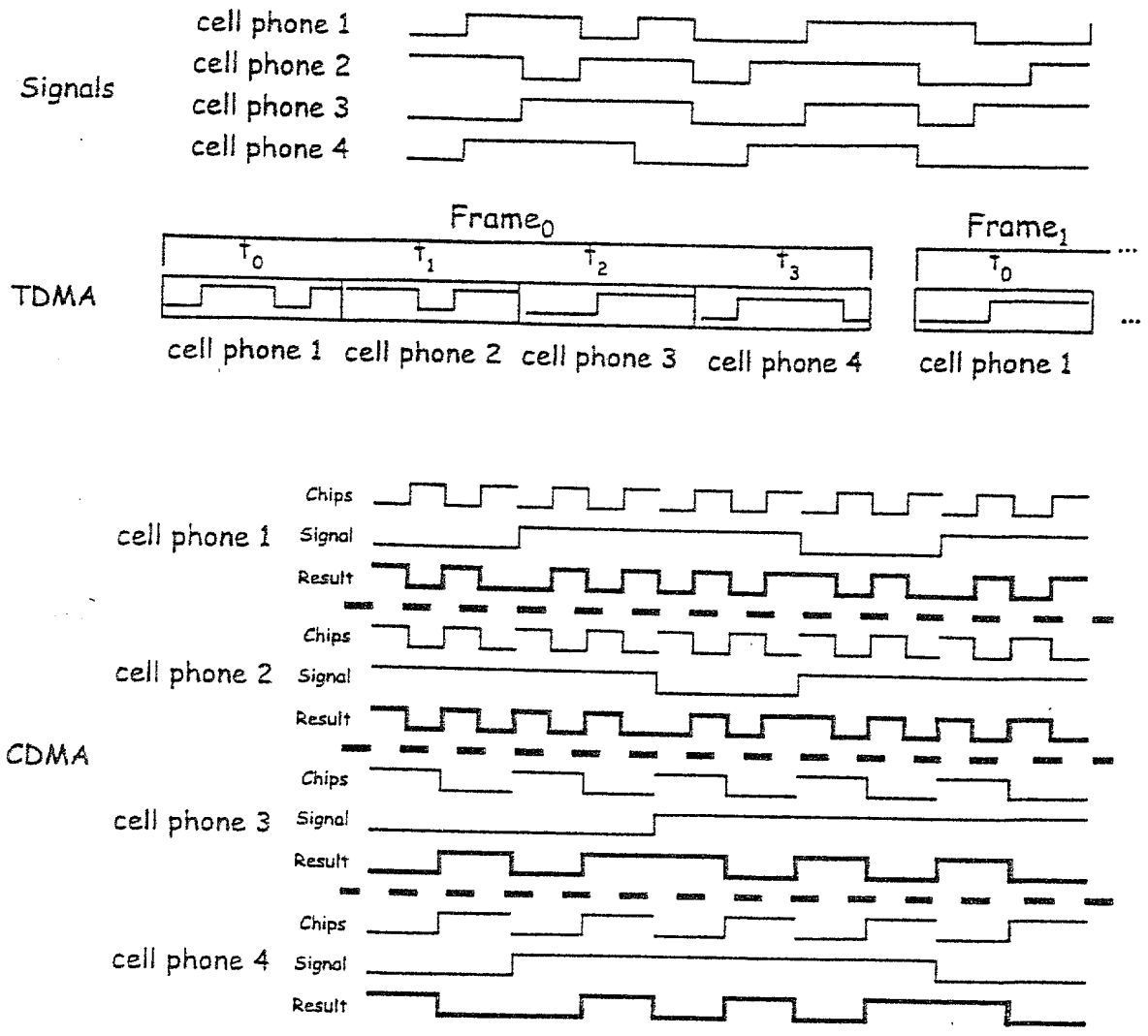

Figure 22

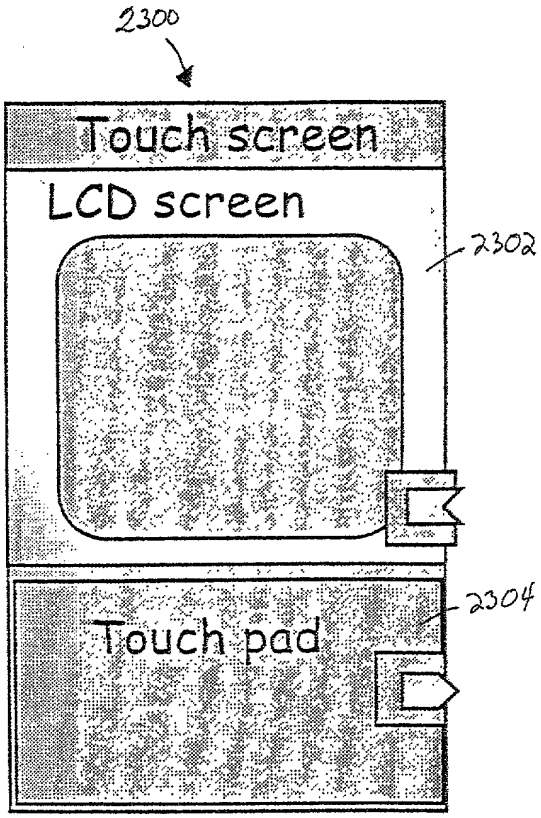

Figure 23A

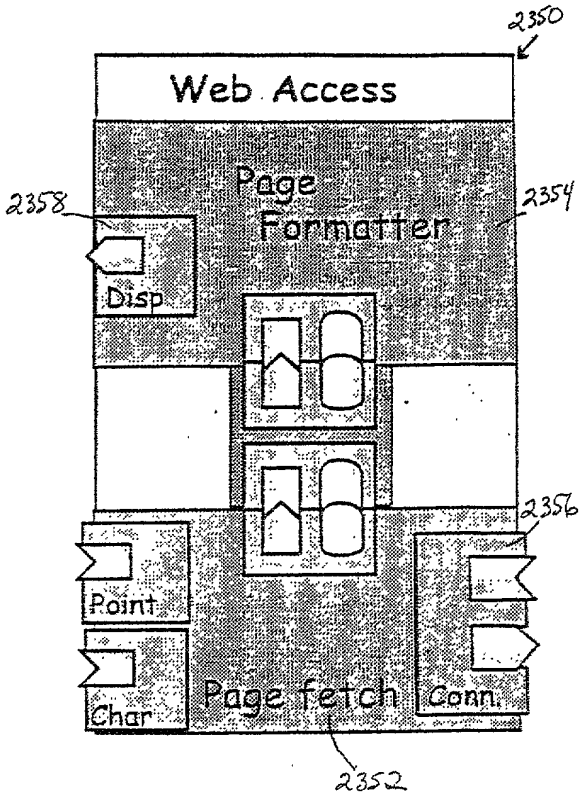

Figure 23B

TOT290" T9088860

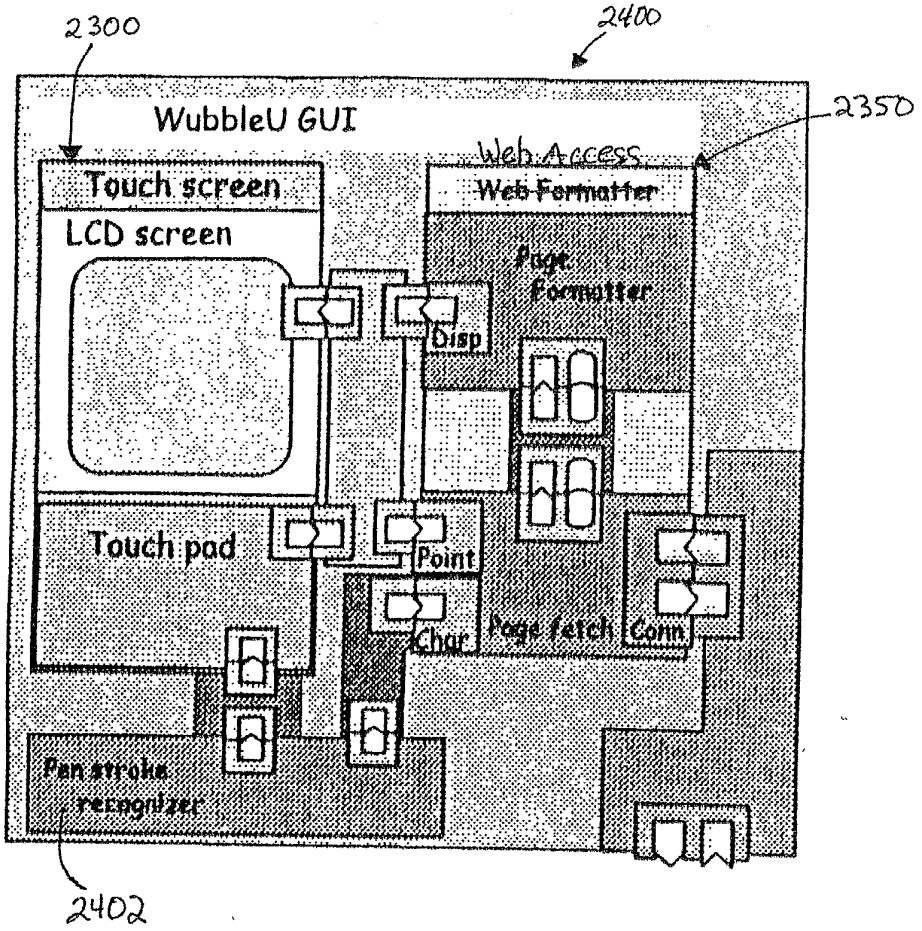

Figure 24A

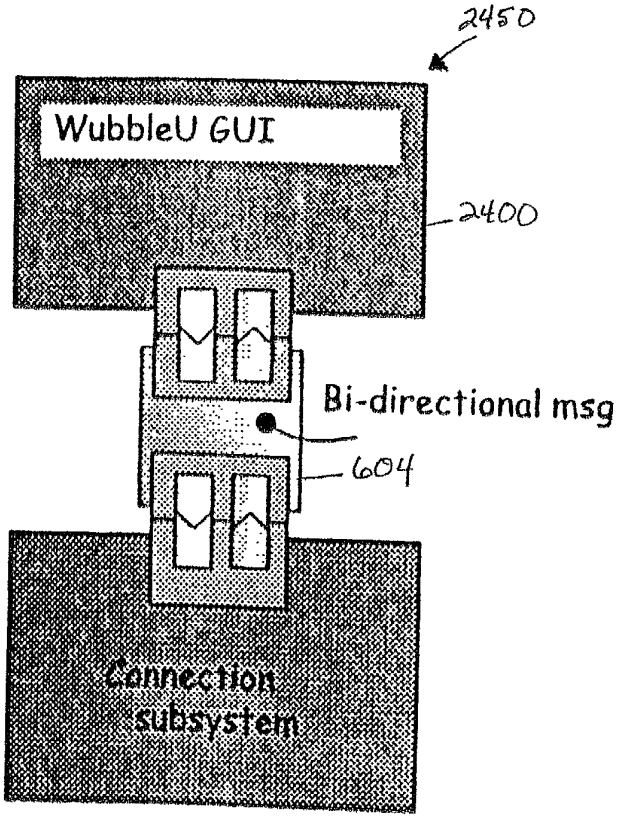

Figure 24B

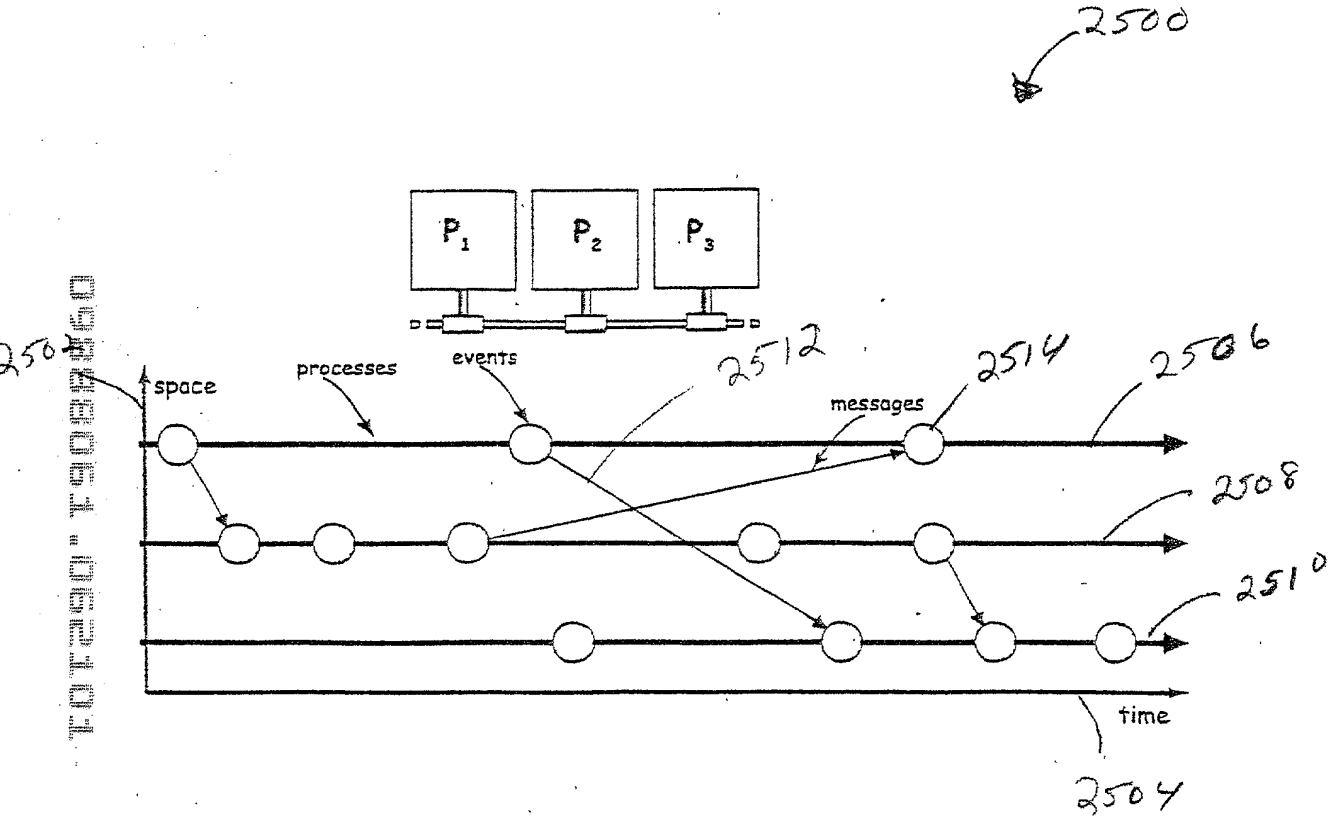

Figure 25

(prior art)

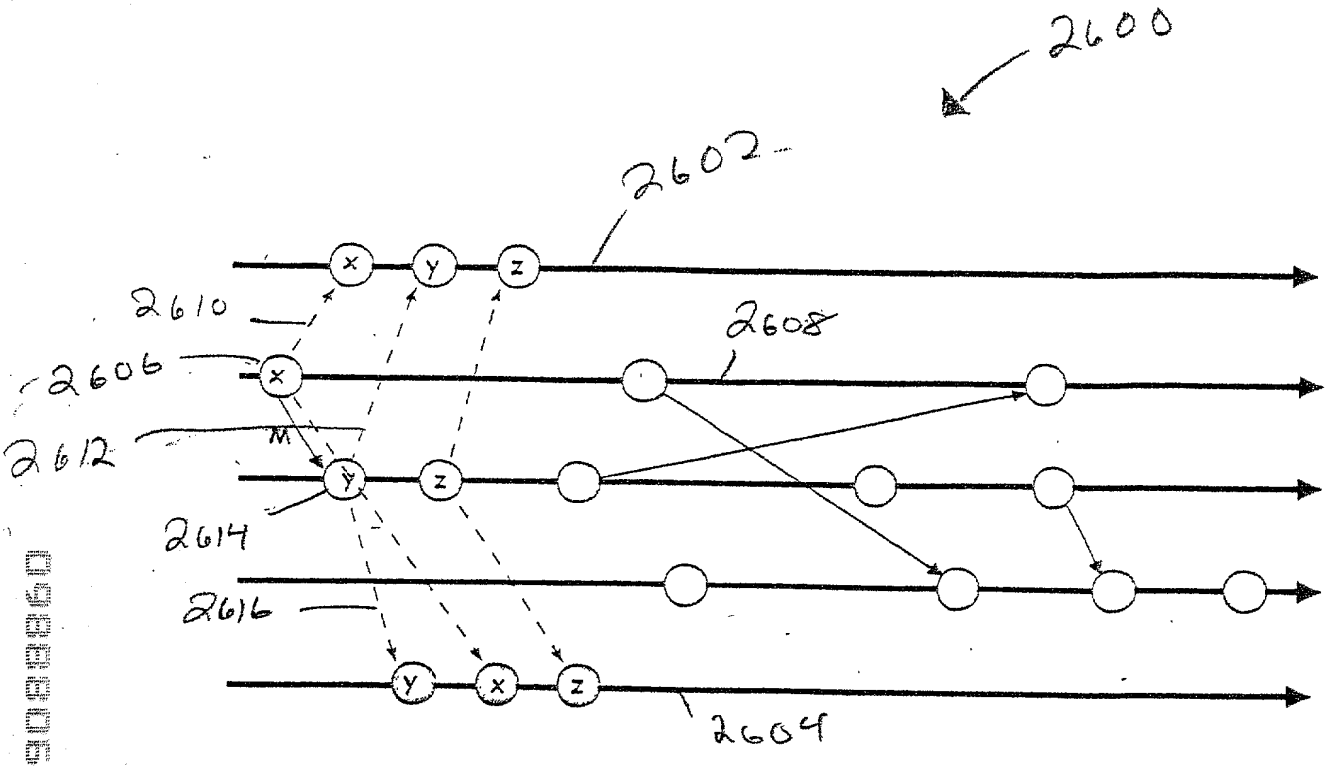

Figure 26

(prior art)

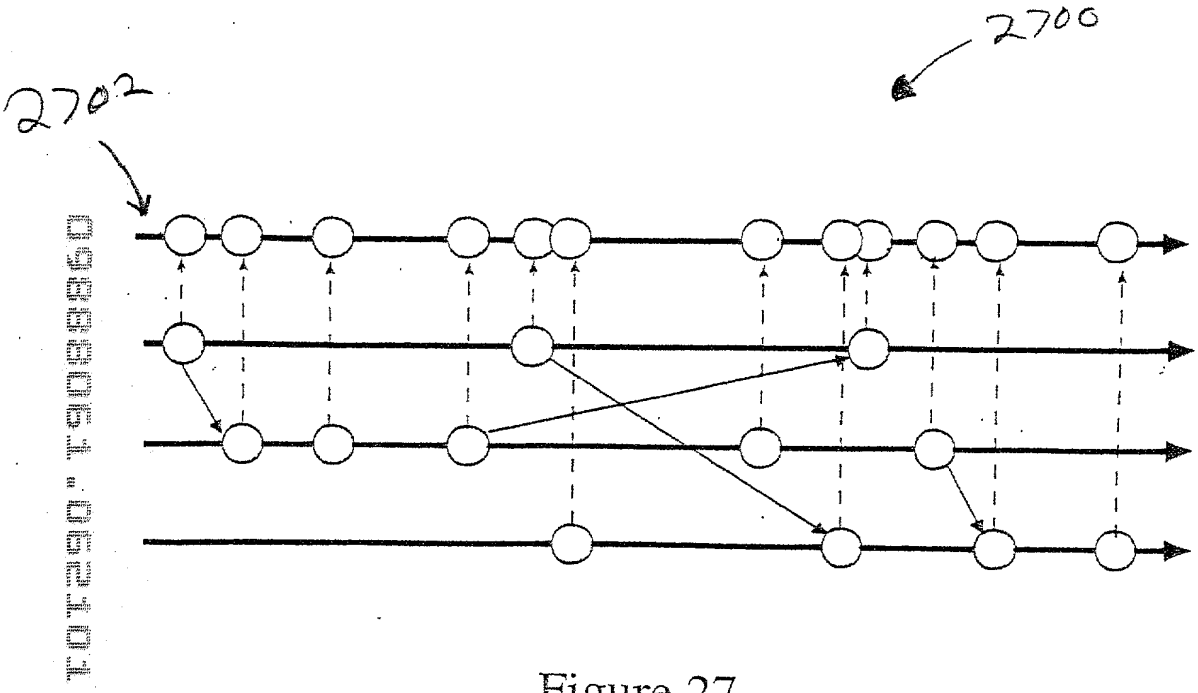

Figure 27

(prior art)

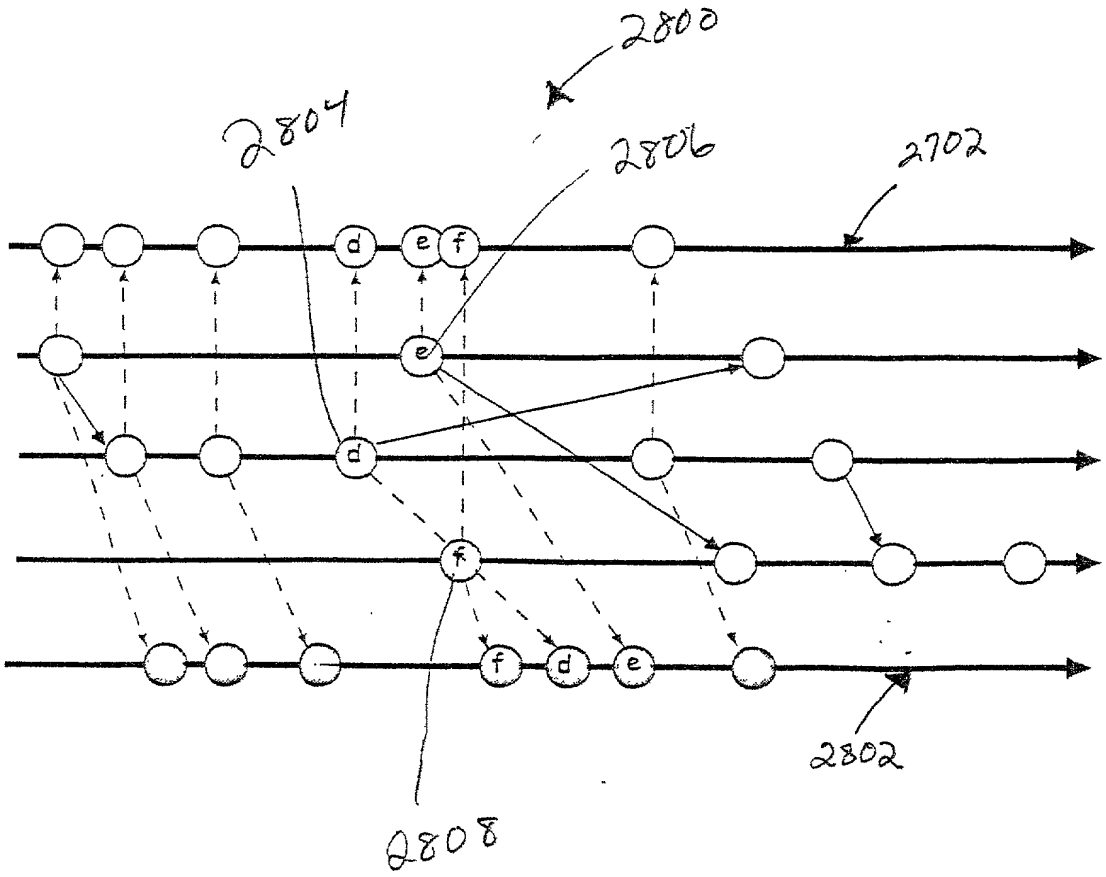

Figure 28

(prior art)

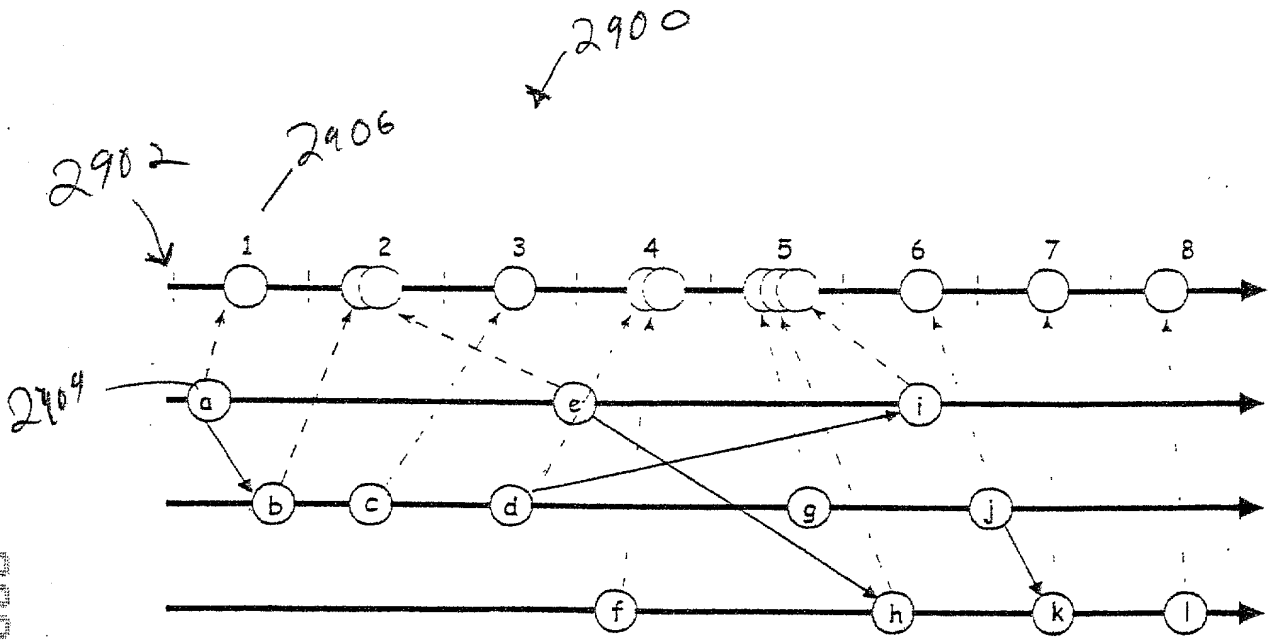

Figure 29

(prior art)

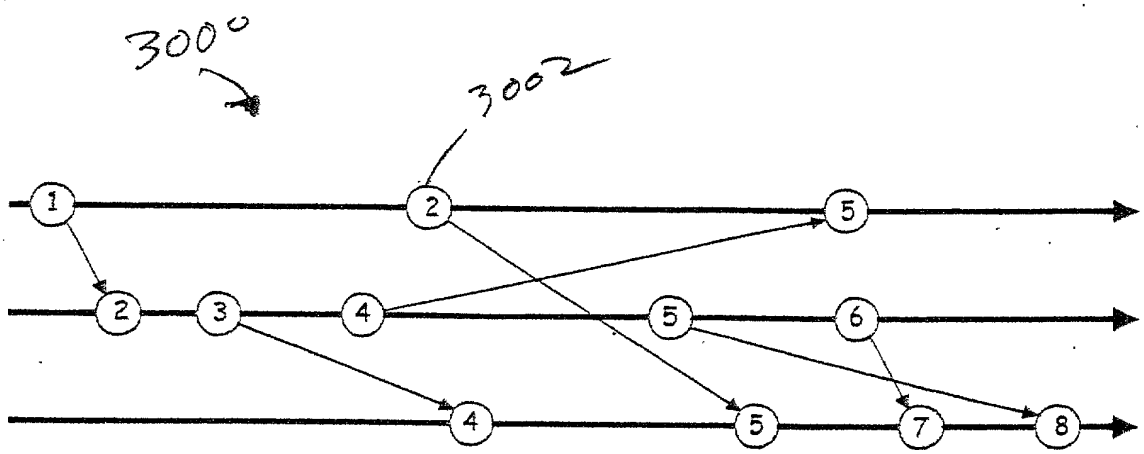

Figure 30

(prior art)

09868054 - 062501

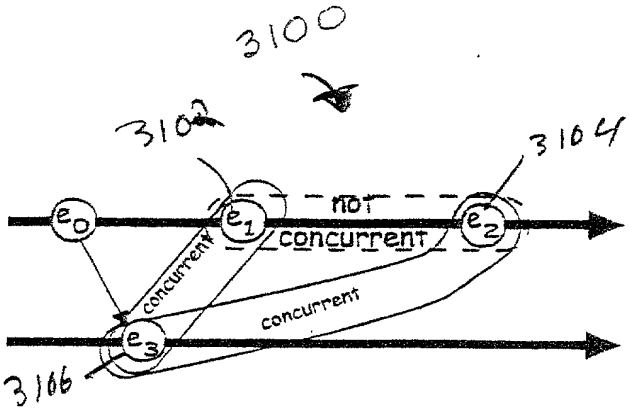

Figure 31

(prior art)

TOKYO-1000350

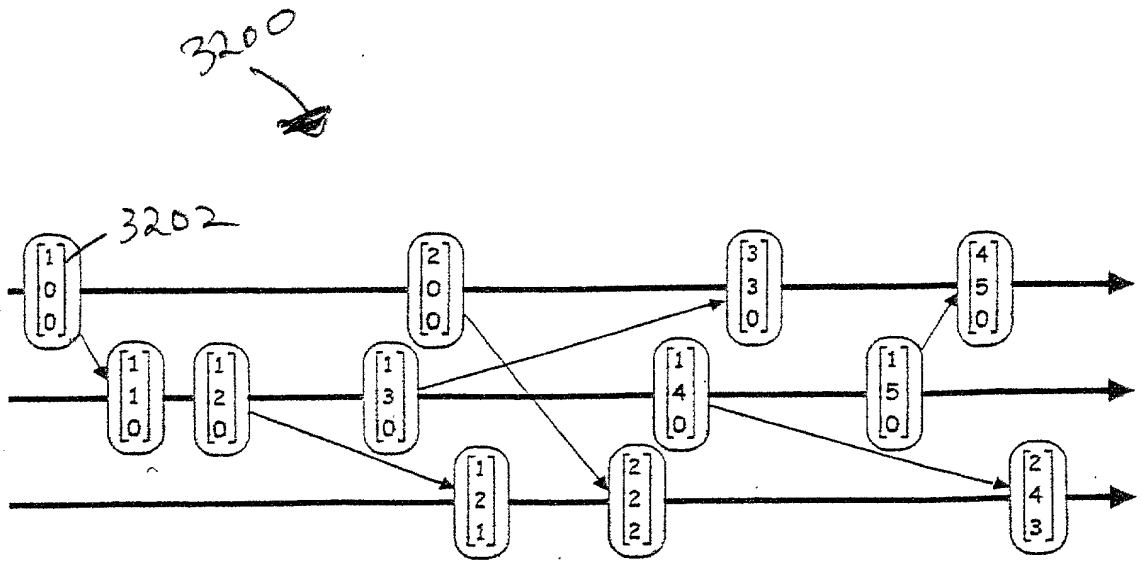

Figure 32

(prior art)

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3300

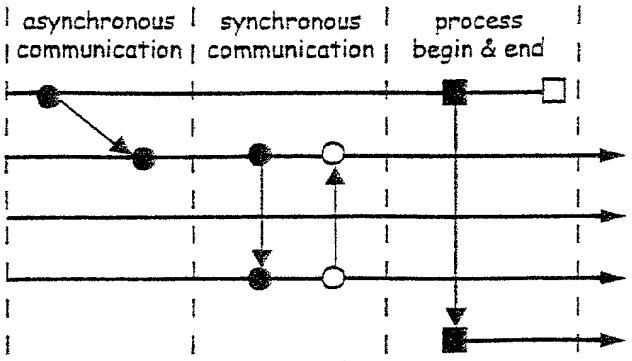


Figure 33

(prior art)

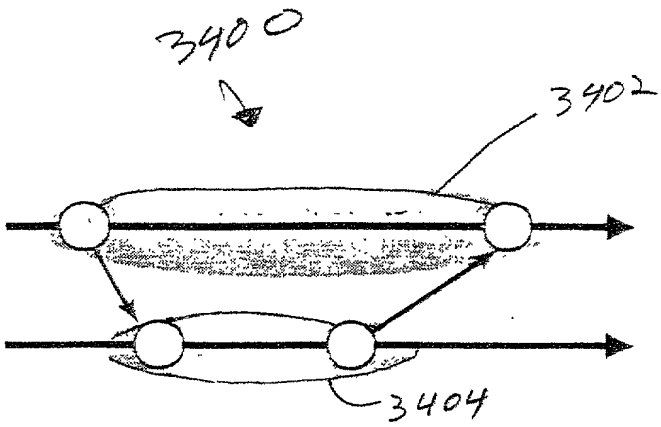


Figure 34

(prior art)

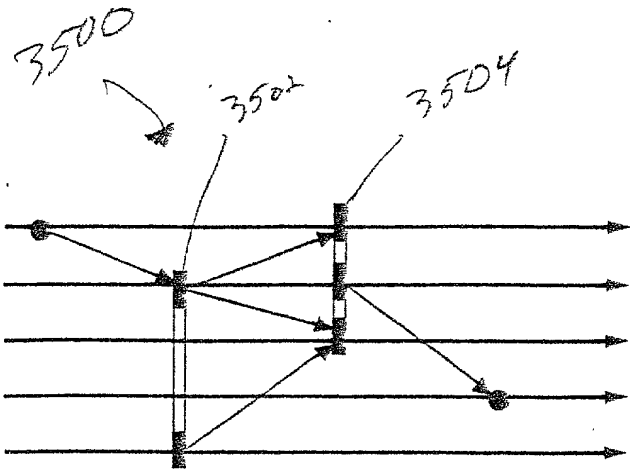


Figure 35

(prior art)

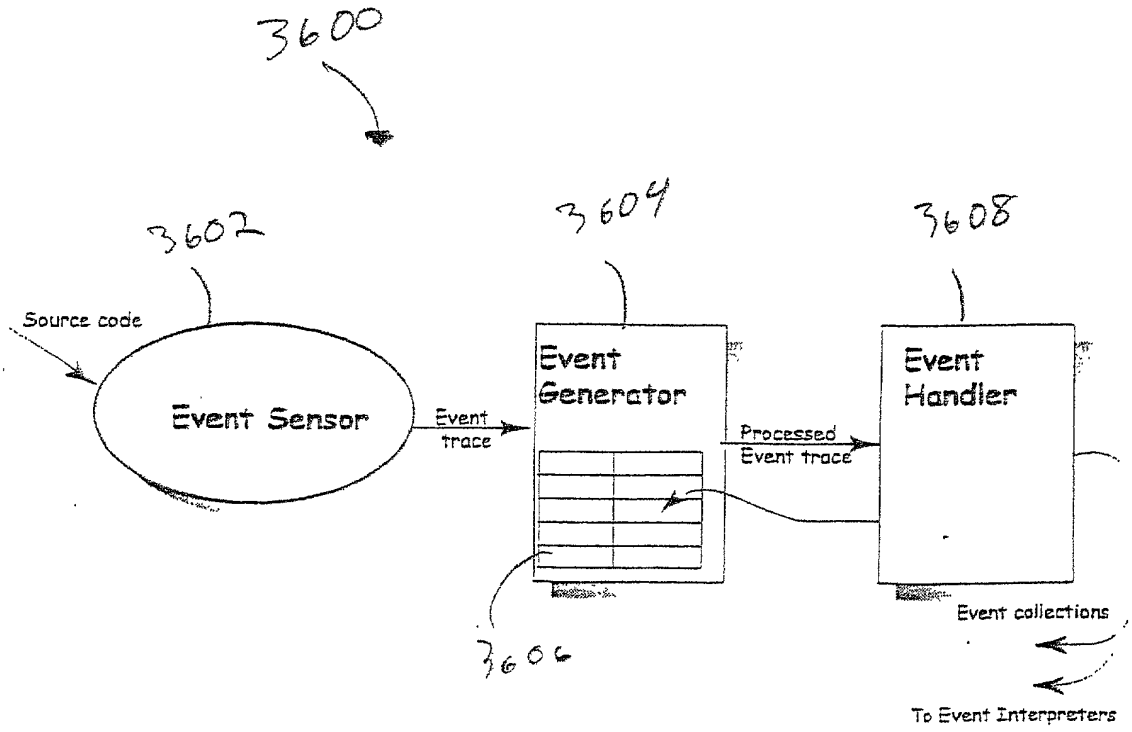


Figure 36

(prior art)

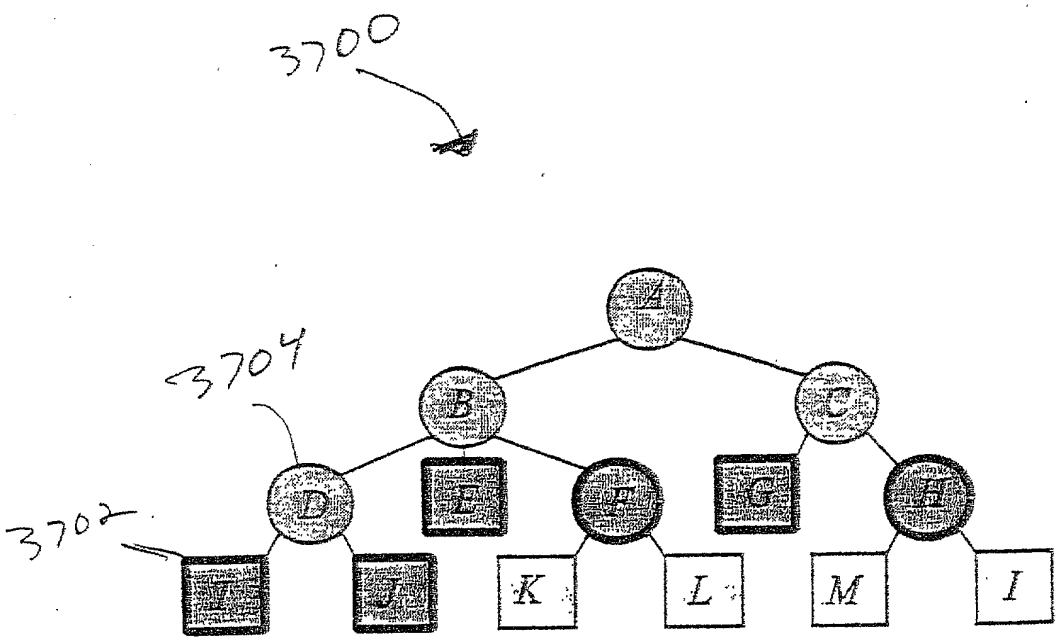
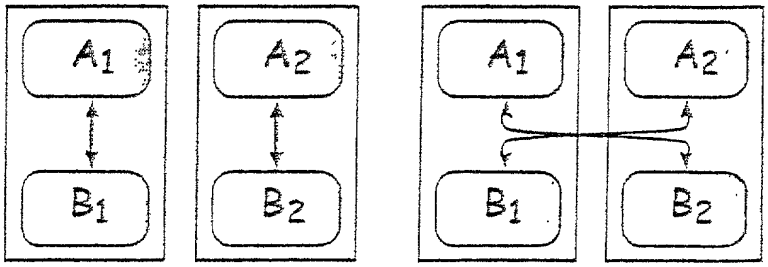


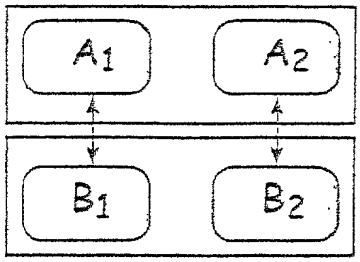
Figure 37

(prior art)



(a) Cohesion(P) = 1.0
Coupling(P) = 0.5

(b) Cohesion(P) = 0.0
Coupling(P) = 1.0



(c) Cohesion(P) = 1.0
Coupling(P) = 0.5

Figure 38

(prior art)

5,860,008 - 05/12/98

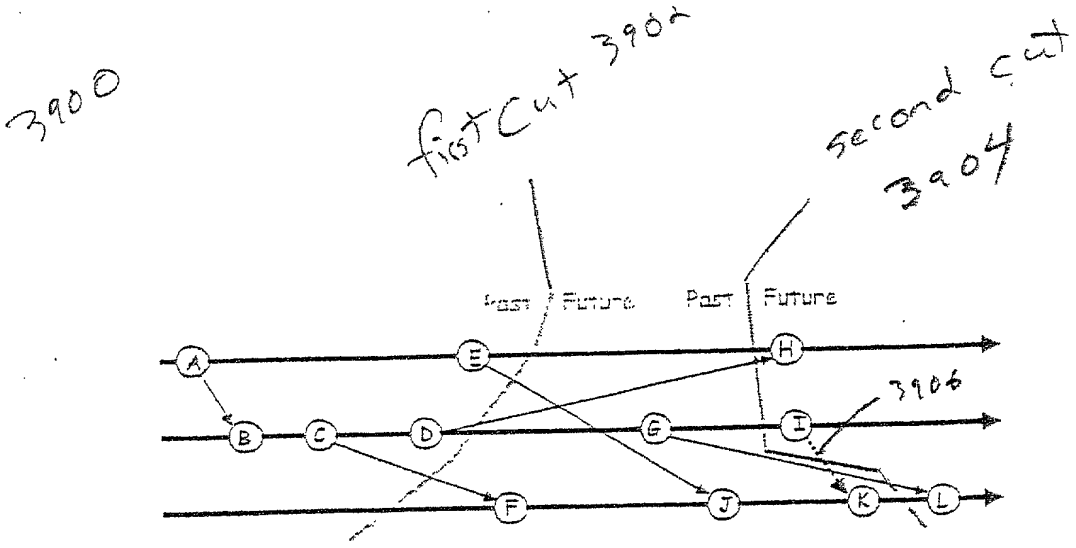


Figure 39

(prior art)

Docket No. 200207.1

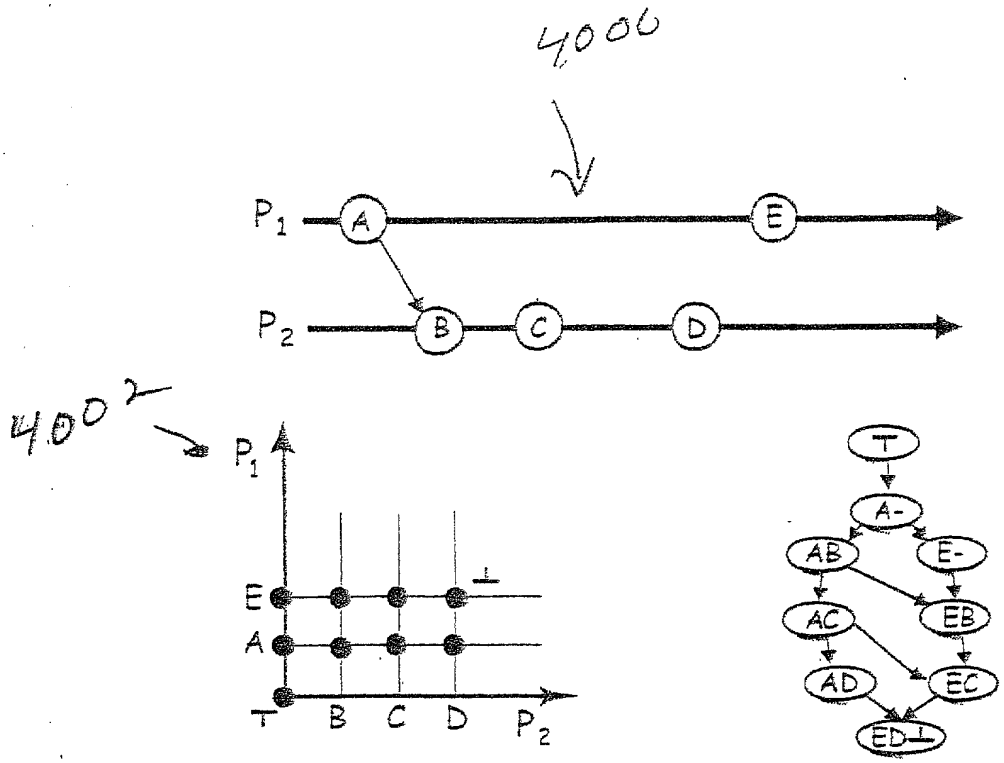


Figure 40

(prior art)

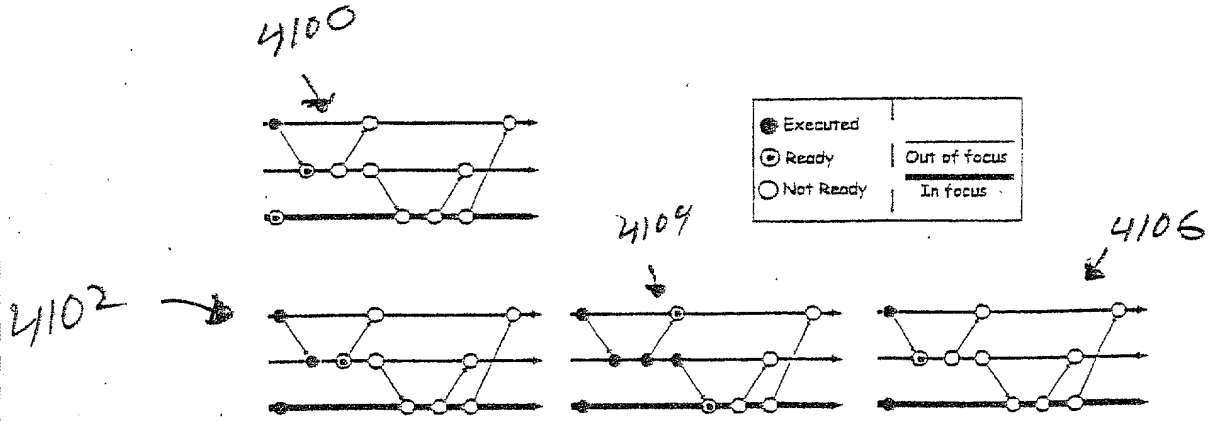


Figure 41

(prior art)

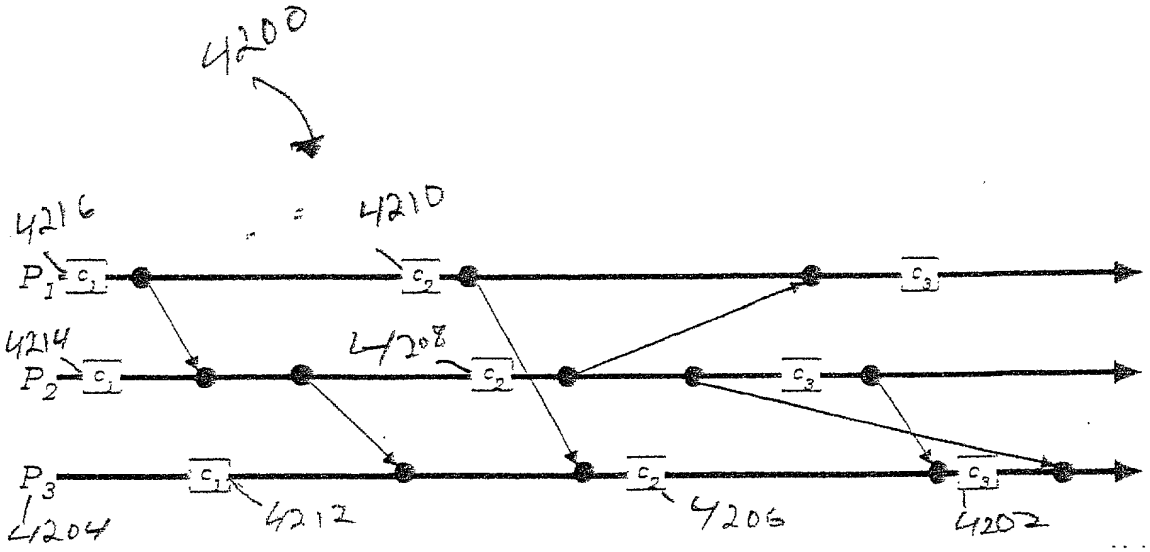


Figure 42

(prior art)

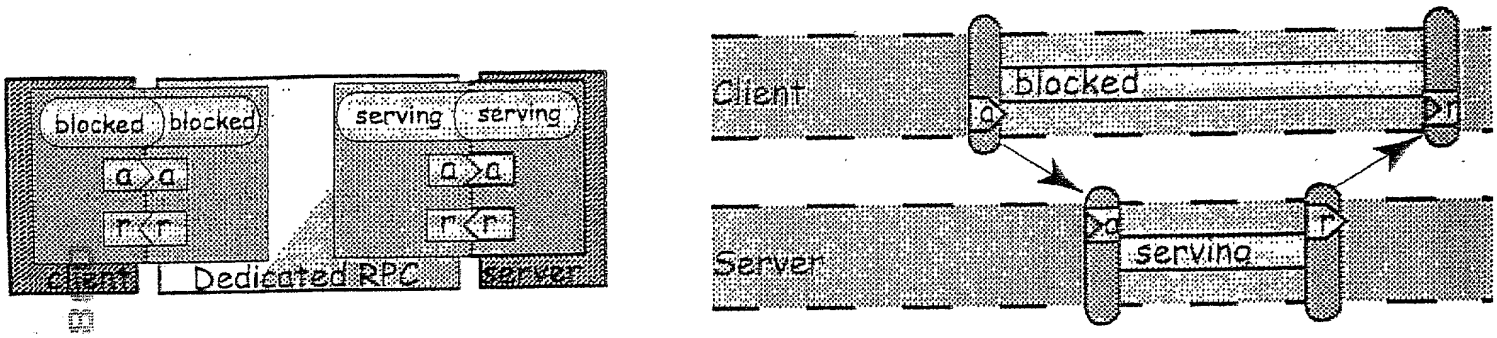


Figure 43

Patent Application Publication

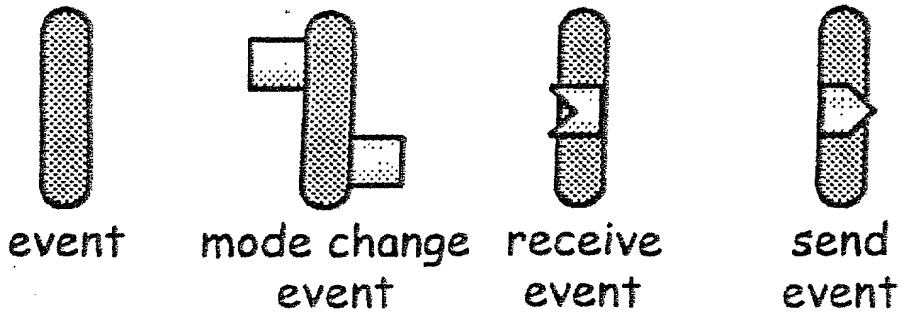


Figure 44

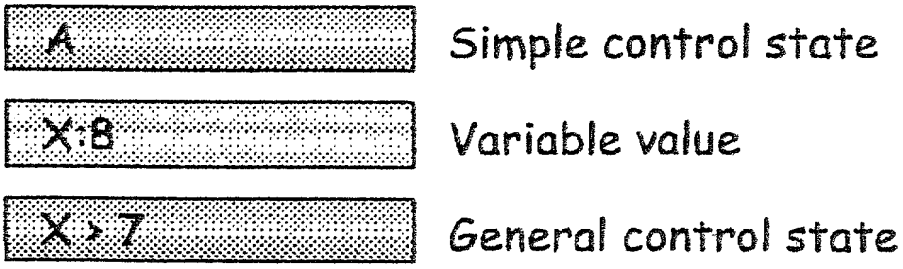


Figure 45

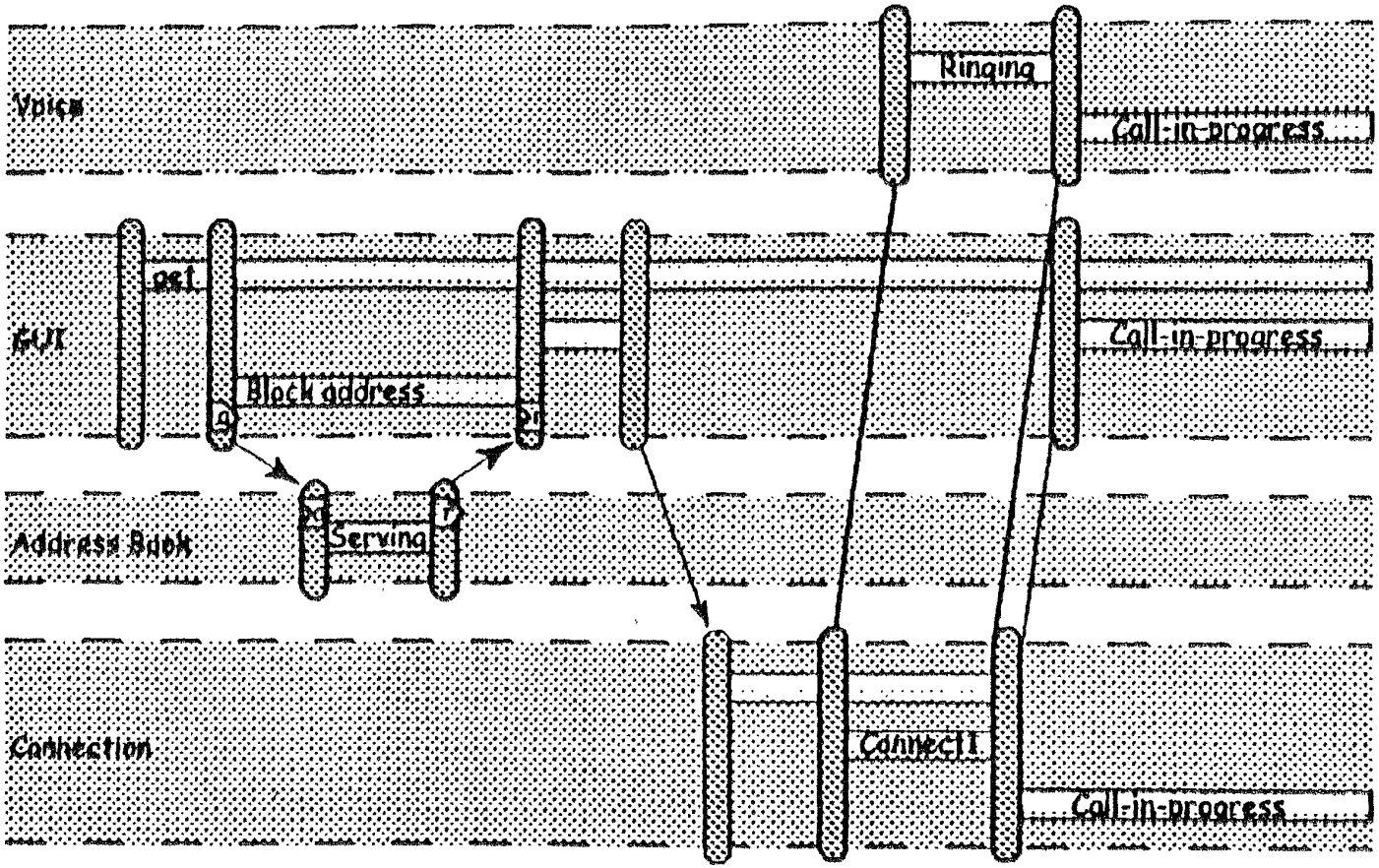

Voice
Ringing
Call-in-progress
GUI
set
Block address
Call-in-progress
Address Book
Serving
Connection
Connect
Call-in-progress

Figure 46

EP 1 290 "T9088860

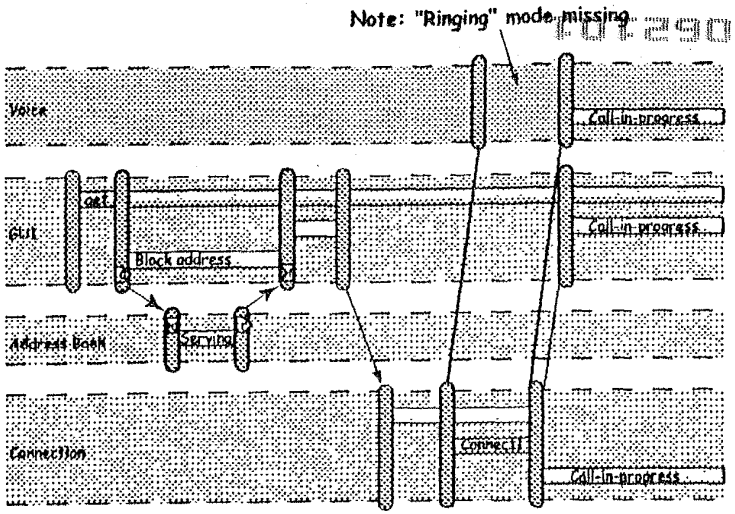


Figure 47A

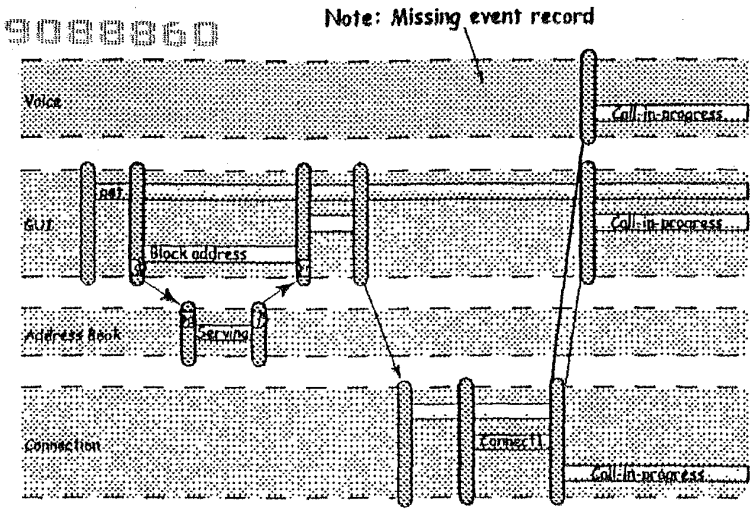


Figure 47B

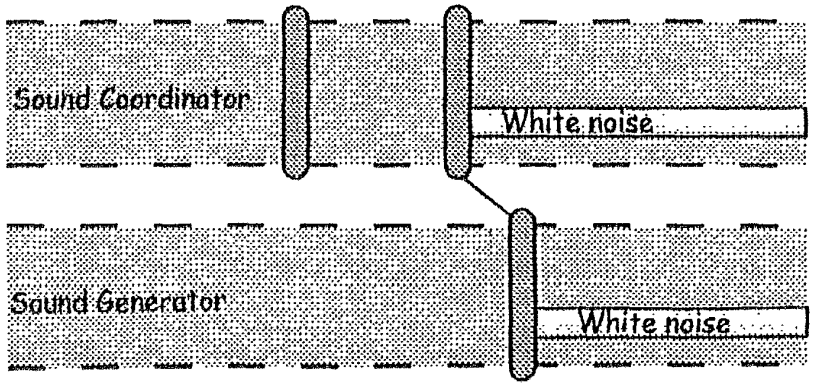


Figure 48

TOT290" T9088860

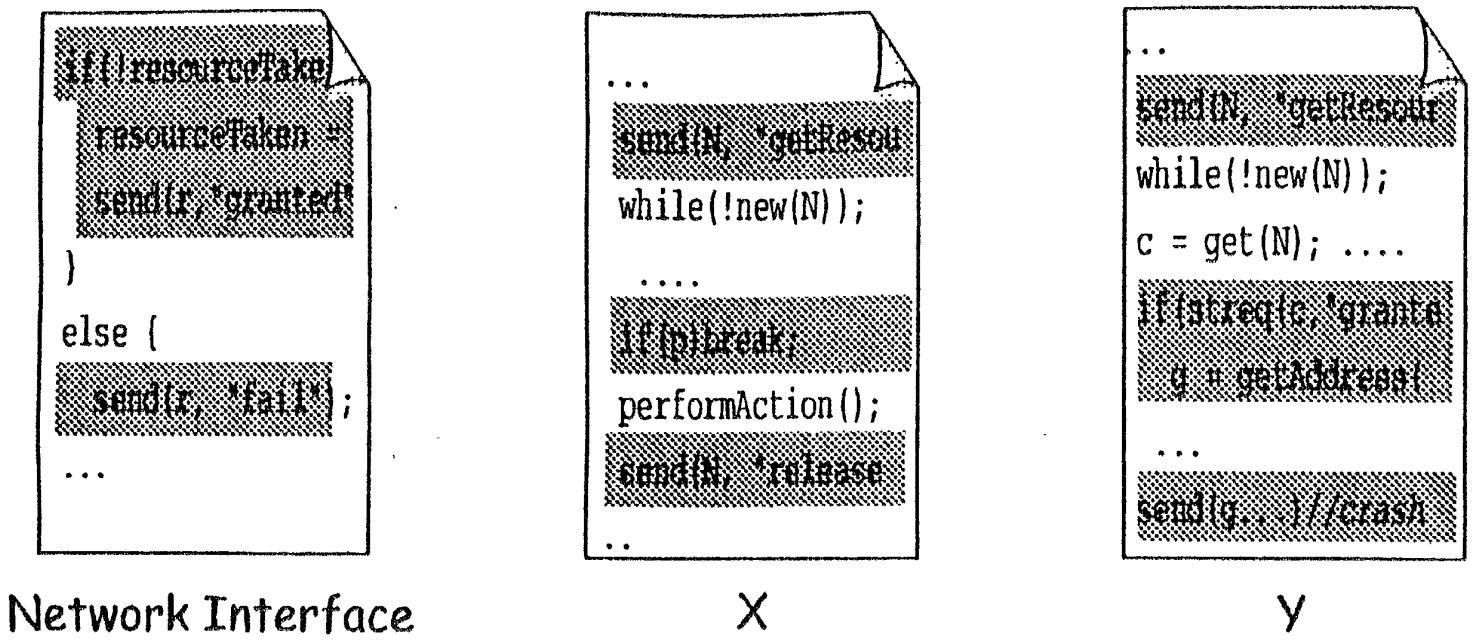


Figure 49

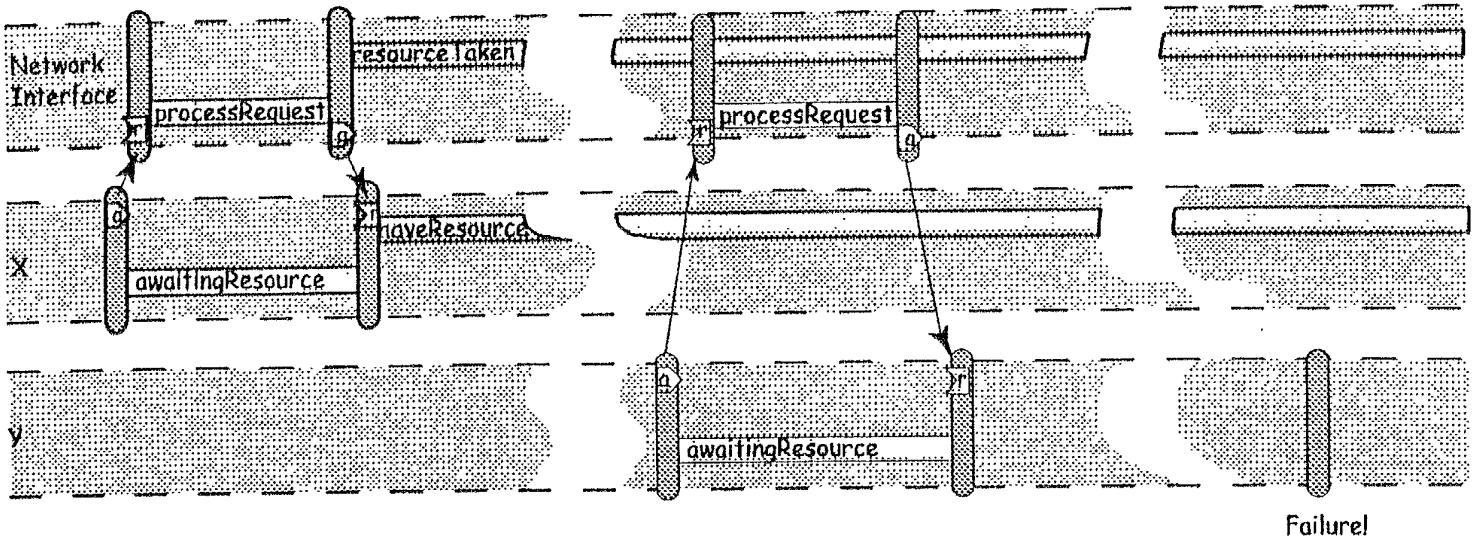

Network
Interface
processRequest
resourceTaken
X
awaitingResource
processRequest
y
awaitingResource
Failure!

Figure 50

Patent 5,999,963

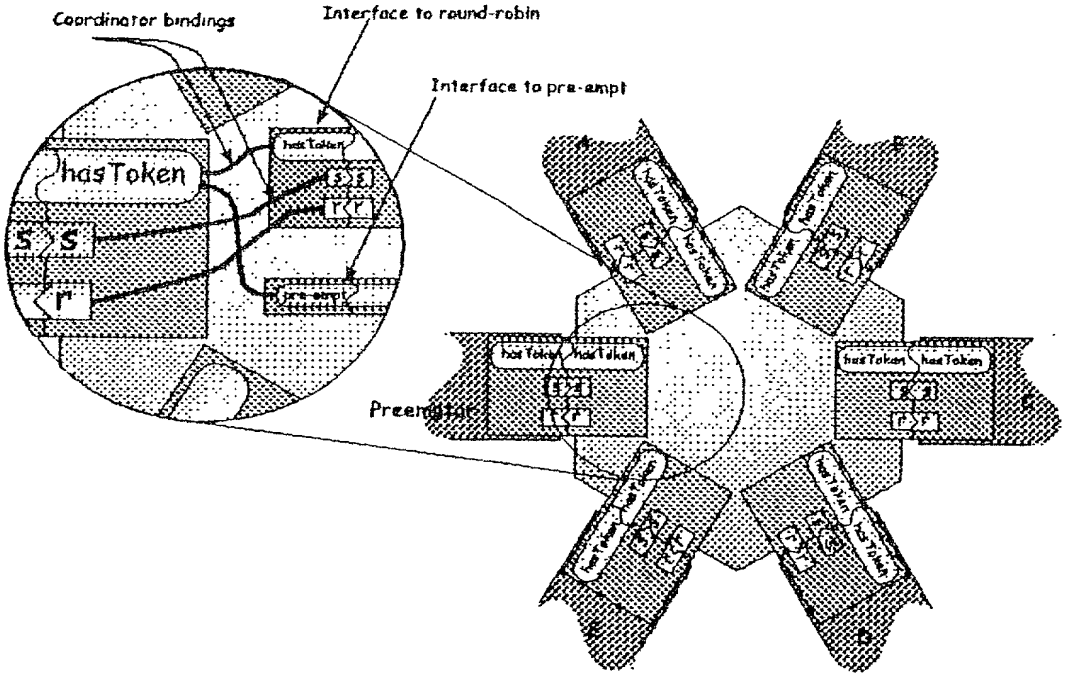


Figure 51A

PERFECT-0000050

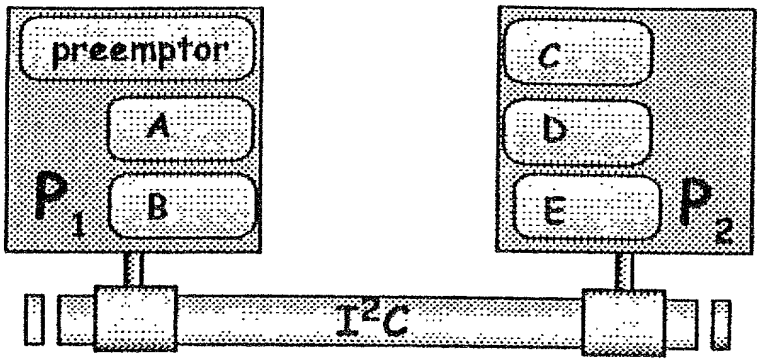


Figure 51B

FOT290 T9088886

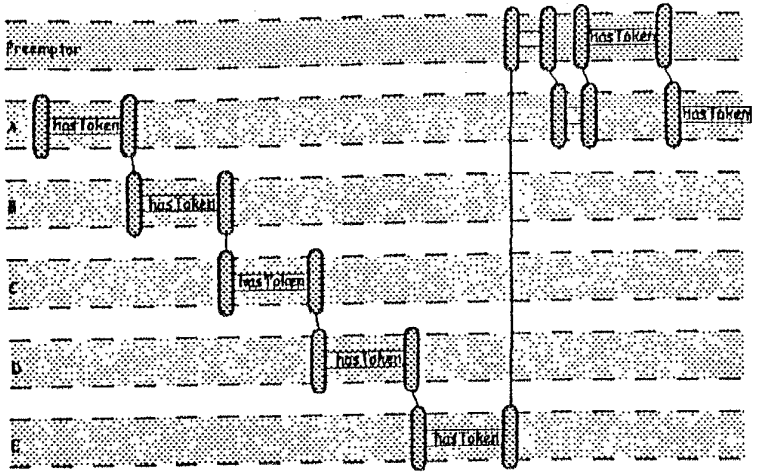


Figure 52A

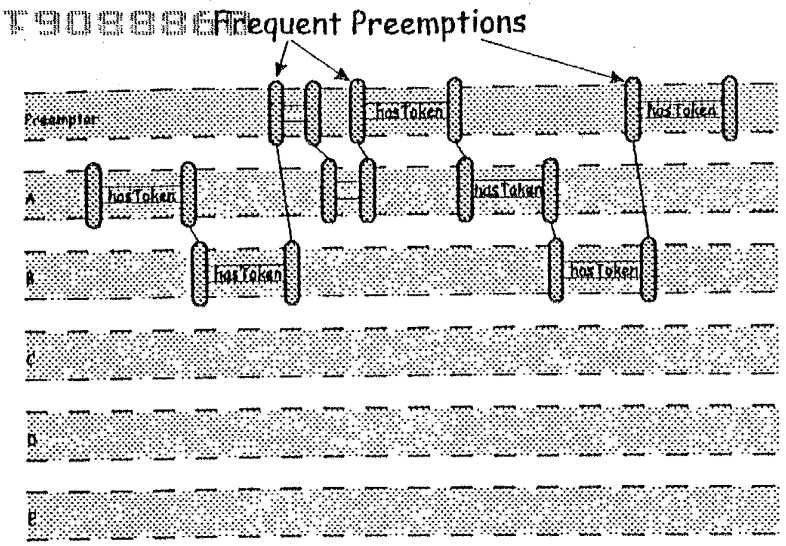


Figure 52B

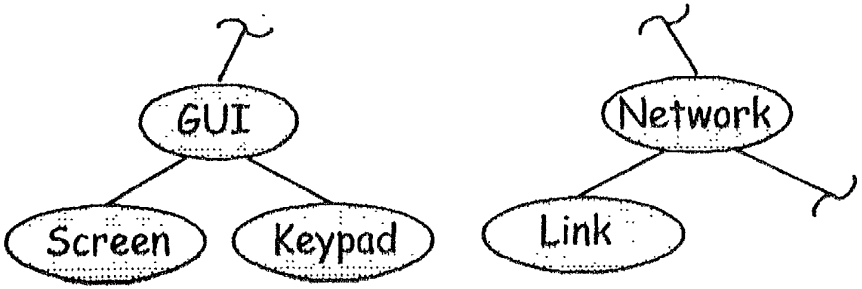


Figure 53A

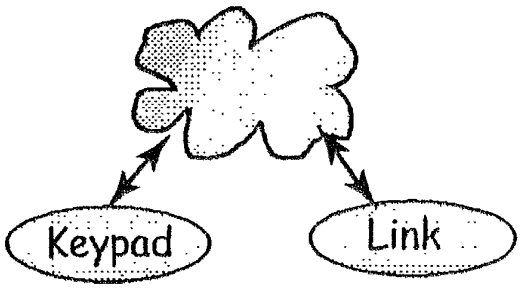
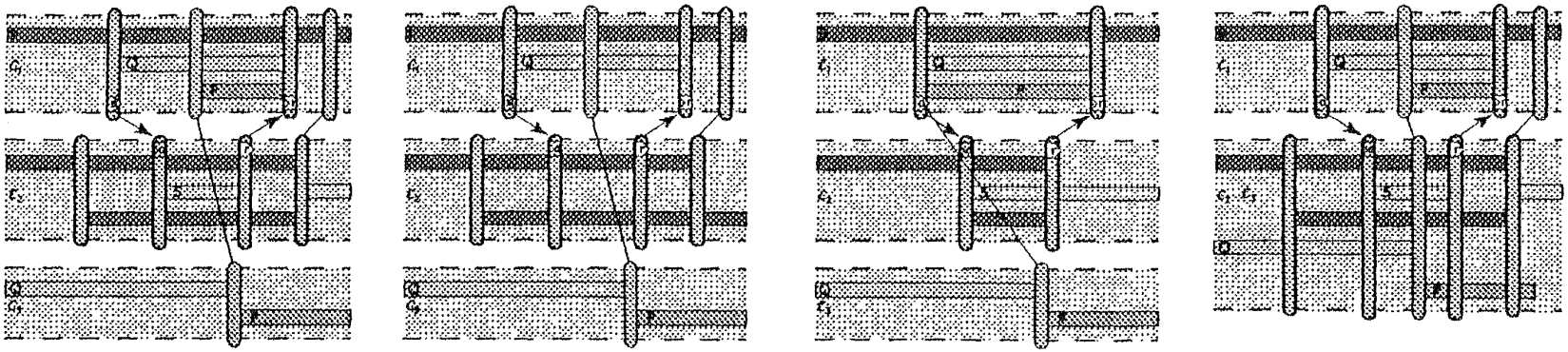


Figure 53B

TOT290 T9088860



(a) Complete evolution diagram.

(b) After states on C_2's middle and bottom trace are clustered.

(c) After some of C_1's events are clustered.

(d) After components C_2 and C_3 are clustered.

Figure 54

TOT290 T9083860

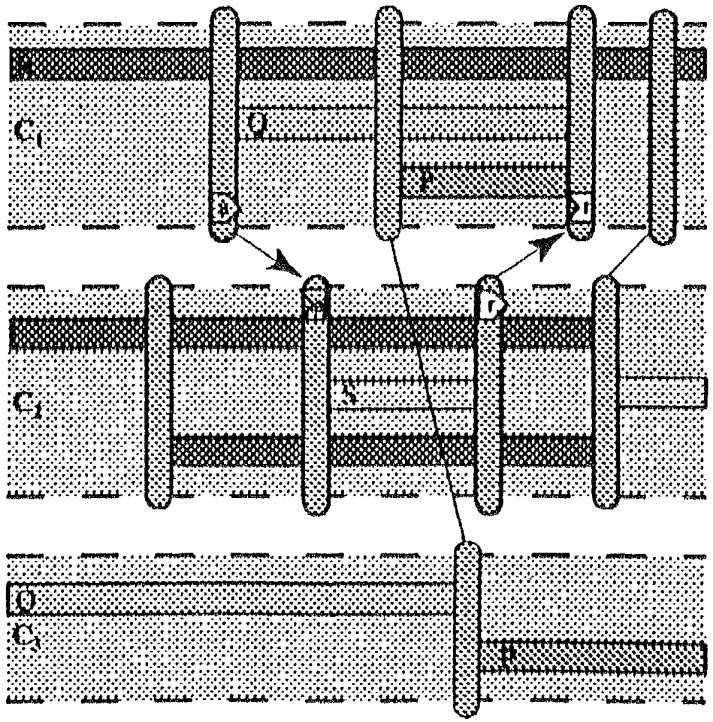


Figure 55A

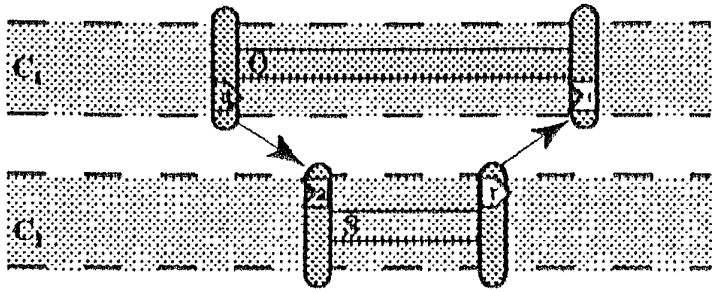


Figure 55B